

Exhibit C

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

IN RE APPLE IPHONE

ANTITRUST LITIGATION,

Case No. 11-cv-06714

YGR (TSH)

DONALD R. CAMERON, et al.,

Plaintiffs,

vs.

Case No. 19-cv-03074

YGR (TSH)

Apple Inc.,

Defendant.

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ZOOM DEPOSITION OF NICHOLAS ECONOMIDES
(Reported Remotely via Video & Web Videoconference)
San Francisco, California (Deponent's location)
Wednesday, August 4, 2021
Volume I

STENOGRAPHICALLY REPORTED BY:

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Apple Inc.,

Defendant.

ZOOM DEPOSITION OF EINER ELHAUGE, taken
on behalf of the Defendant, with the deponent
located in San Francisco, California, commencing at
9:33 a.m., Wednesday, August 4, 2021, remotely
reported via Video & Web videoconference before
REBECCA L. ROMANO, a Registered Professional
Reporter, Certified Shorthand Reporter, Certified
Court Reporter.

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Economics LLC

Scott B. Murray, Director, Commercial

Litigation at Apple

Carissa Narcisco, Concierge Technician

Terry Weiss, Videographer

Kristof Zetenyi, Ph.D., Analysis Group

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I N D E X

DEPONENT EXAMINATION
NICHOLAS ECONOMIDES PAGE
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E X H I B I T S

NUMBER PAGE

DESCRIPTION

Exhibit 29 Expert Class Certification 16
Report of Professor Nicholas
Economides;

Exhibit 30 Further Errata Regarding 18
Expert Class Certification
Report of Professor Nicholas
Economides;

Exhibit 31 Documents Relied Upon for 19
Expert Class Certification
Report of Professor Nicholas
Economides (June 1, 2021);

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1	E X H I B I T S (cont'd)		
2	NUMBER		PAGE
3		DESCRIPTION	
4	Exhibit 32	Errata Regarding Expert Class	120
5		Certification Report of	
6		Professor Nicholas	
7		Economides;	
8			
9	Exhibit 33	CY2019 Game Industry Profit	179
10		Gaming Business Planning &	
11		Strategy Team May 2020.	
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1 San Francisco, California;

2 Wednesday, August 4, 2021

3 9:33 a.m.

4 ---oOo---

5

6 THE VIDEOGRAPHER: Good morning. We're
7 on the record at 9:33 a.m. on August 4th, 2021.

8 Audio and video recording will continue
9 to take place unless all parties agree to go off
10 the record. 09:33:24

11 This is the video -- video-recorded
12 deposition of Nicholas Economides in the matter of
13 Donald Cameron versus Apple Inc. filed in the
14 United States District Court,
15 Northern District of California, 09:33:36
16 Case No. 411-CV-06714-YGR.

17 This deposition is being held via Zoom
18 Remote Meetings. My name is Terry Weiss from the
19 firm of Veritext Legal Solutions and I'm your
20 videographer. Our court reporter today is 09:33:54
21 Rebecca Romano from the firm of
22 Veritext Legal Solutions.

23 I am not related to any party in this
24 action nor am I financially interested in the
25 outcome. 09:34:05

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1 Counsel and everyone attending remotely 09:34:06
2 will now state their appearances and affiliations
3 for the record.

4 If there are any objections to
5 proceeding, please state them at the time of your 09:34:13
6 appearance, beginning with the noticing attorney.

7 MR. SWANSON: Dan Swanson, Gibson Dunn,
8 representing Apple Inc.

9 MR. HARRINGTON: Ben Harrington,
10 Hagens Berman, representing the Developer 09:34:26
11 Plaintiffs.

12 And I'm joined by Steve Berman, Rob
13 Lopez, Ted Wojcik, also of Hagens Berman. And also
14 present is Luke Martin of Legal Economics, a
15 colleague of Professor Economides. 09:34:40

16 MR. BURT: Thomas Burt, Wolf Haldenstein,
17 Consumer Plaintiffs.

18 MR. PHILLIPS: I'm Harry Phillips from
19 Gibson, Dunn for Apple. And we have with us
20 Scott Murray, director of commercial litigation at 09:34:52
21 Apple.

22 THE VIDEOGRAPHER: And we have Kristof,
23 right?

24 We have two more, don't we?

25 MR. PHILLIPS: I'll introduce them. 09:35:13

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1 Yes, we also have Kristof Zetenyi from 09:35:13
2 Analysis Group and Todd Kumler from Cornerstone
3 Research.

4 THE VIDEOGRAPHER: And Caeli Higney.

5 MS. HIGNEY: Yes. We have Caeli Higney 09:35:25
6 from Gibson Dunn, representing Apple Inc.

7 THE VIDEOGRAPHER: Thank you.

8 Would the court reporter please swear in
9 the witness.

10 THE COURT REPORTER: If you could raise 09:35:34
11 your right hand for me, please.

12 THE DEPONENT: (Complies.)

13 THE COURT REPORTER: You do solemnly
14 state, under penalty of perjury, that the testimony
15 you are about to give in this deposition shall be 09:35:34
16 the truth, the whole truth and nothing but the
17 truth?

18 THE DEPONENT: I do.

19
20 09:35:34

21
22
23
24
25 /////
09:35:48

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1 NICHOLAS ECONOMIDES, 09:35:49
2 having been administered an oath, was examined and
3 testified as follows:
4
5 EXAMINATION 09:35:49
6 BY MR. SWANSON:
7 Q. Good morning, Professor Economides.
8 A. Good morning.
9 Q. As you heard, I'm Dan Swanson and I'll be
10 asking the questions today on behalf of Apple. 09:35:57
11 To start with, would you please state
12 your full name for the record?
13 A. Yes. My name is Nicholas Economides.
14 Q. And what is your business address?
15 A. Well, I mean, I'm a professor at the 09:36:13
16 Stern School of Business, New York University,
17 44 -- 44 West 4th Street, New York, New York 10012.
18 Q. And I take it you have been deposed
19 before?
20 A. Yes. 09:36:29
21 Q. Have you experienced a video -- a virtual
22 deposition before?
23 A. No.
24 Q. All right. Are -- all right. Do you
25 feel you're familiar with the procedures for the 09:36:39

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1 video deposition today? 09:36:42

2 A. I'm learning.

3 Q. All right. Well, if -- we're -- we're
4 all learning together in this difficult season.

5 But if you need to pause at any point, if 09:36:53

6 you're having any difficulties with your equipment,

7 please -- please let us know. And we'll take

8 regular breaks throughout the day as well, but if

9 at any point in time you'd like to take a break,

10 please just ask and we'll do it. 09:37:07

11 A. Thank you.

12 Q. Is there any reason that we can't go
13 forward with the deposition today, Professor?

14 A. I -- I don't know any reason.

15 Q. Okay. To your knowledge, has a Court 09:37:22
16 ever excluded any of your opinions or testimony?

17 A. I do not believe so.

18 Q. Okay. To your knowledge, has a Court
19 ever expressed disagreement with any of your

20 opinions? 09:37:43

21 A. I -- I don't recall.

22 Q. Your billing rate is \$900 an hour?

23 A. Correct.

24 Q. Do you have an estimate of how many hours
25 you've spent on the case to date? 09:37:52

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1 A. It's -- no, I don't have a good estimate. 09:37:55

2 Q. Did -- do you -- do you feel that there

3 is some minimum amount of time you spent on the

4 case?

5 A. It's -- it's difficult for me to compute. 09:38:06

6 If it's important, I will try to look at my records

7 and let you know.

8 Q. Well, do you think you spent more than

9 100 hours so far on the case?

10 A. I think so, yes. 09:38:17

11 Q. Okay. Do you think you've spent a great

12 deal more than that?

13 A. Probably more than that. I'm not sure

14 exactly how much.

15 Q. Okay. You refer to your staff at various 09:38:29

16 points in your report.

17 Is that staff from Legal Economics?

18 A. Correct.

19 Q. Okay. And I gather Luke Martin is -- is

20 one among your staff? 09:38:44

21 A. Correct.

22 Q. And what role has he played in assisting

23 you?

24 A. The staff of Legal Economics has

25 generally played a role in creating the report 09:38:57

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1 together with me in going back and forth with -- 09:39:02
2 not only the background but also drafting some part
3 of the report which I supervise them. And I went
4 back and kind of finalized. Make sure that
5 everything that was in the report was 100 percent 09:39:18
6 my opinion.

7 Q. Okay. So Mr. Martin and the staff at
8 Legal Economics helped you draft your expert
9 report; is that fair to say?

10 A. It's fair -- fair to say that I have 09:39:32
11 received help from them. But the -- the way the
12 report is right now, the final report is
13 100 percent my opinion and -- yes, that's all.

14 Q. Has anyone else from Legal Economics
15 assisted, in addition to Mr. Martin? 09:39:50

16 A. Thor Sletten, S-L-E-T-T-E-N. And people
17 under him.

18 Q. Any -- any names that you recall?

19 A. I -- I would say Rajat, R-A-J-A-T,
20 Krishna. Probably others as well. I wouldn't be 09:40:20
21 able to say everybody's name.

22 Q. You're affiliated with Legal Economics?

23 A. I'm not affiliated with Legal Economics.

24 Q. And Legal Economics is an entity that
25 Professor Elhauge owns, I gather? 09:40:42

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1 A. Yeah, I -- I believe he's the president. 09:40:46

2 I'm not sure -- I'm not sure of the ownership

3 structure.

4 Q. And what are the -- the arrangements for

5 compensation with respect to your work on this 09:40:57

6 case?

7 Do you -- do you receive a portion of

8 your \$900 an hour, or all of it?

9 A. All of it.

10 Q. Okay. Do you receive a portion of the 09:41:08

11 billings of Legal Economics?

12 A. I do.

13 MR. SWANSON: Okay. Let's -- we'll spend

14 a lot of time with your report. Let's start up by

15 marking it as an exhibit. 09:41:26

16 (Exhibit 29 was marked for identification

17 by the court reporter and is attached hereto.)

18 MR. SWANSON: It will take a moment to

19 appear on the Exhibit Share as they always -- it

20 always seems to be the case. But in the meantime, 09:41:35

21 I will describe it for the record.

22 We're having marked as -- I believe the

23 next in order would be Exhibit 28. This is, I

24 think, Tab 1 from our -- our group of documents.

25 But it is a document, the first page of which bears 09:41:53

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1 the title "Expert Class Certification Report of 09:41:58
2 Professor Nicholas Economides."

3 It -- it is relatively voluminous. We
4 don't have a page count on it. But once it pops up
5 on the screen, Professor, if you could verify that 09:42:17
6 this is, indeed, your expert report.

7 I will, by the way, mark next your errata
8 just so you know that. We'll get to that in a
9 moment.

10 MR. PHILLIPS: And the report should be 09:42:33
11 up now.

12 THE DEPONENT: Yeah. I wonder if -- if
13 it's okay for you to have an unmarked hard copy
14 next to me and look at that more carefully.

15 Q. (By Mr. Swanson) Oh, yes, of course. 09:42:46
16 All -- all we need for the record is for you to
17 take a look at the version online and just make
18 sure that that is the right document, and then
19 you're perfectly free to work with the hard copy.

20 A. Yeah, one minute. I am trying to see the 09:43:08
21 whole thing.

22 Yes, it seems to be the right document.

23 Q. Okay. Great.

24 And I take it you do have a hard copy you
25 can work with? 09:43:40

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1 A. Correct. 09:43:41

2 MR. SWANSON: Good. Okay.

3 Well, while we're at it, let's have

4 marked as Exhibit 29, a document -- the title of

5 which is "Further Errata Regarding Expert Class 09:43:52

6 Certification Report of Professor

7 Nicholas Economides."

8 (Discussion off the stenographic record.)

9 (Exhibit 30 was marked for identification

10 by the court reporter and is attached hereto.) 09:43:59

11 MR. PHILLIPS: And that should be up as

12 well, too.

13 Q. (By Mr. Swanson) Let us know if that is

14 the errata that I believe was filed yesterday,

15 Professor? 09:44:44

16 A. Yes, that's correct.

17 Q. So with respect to your report, we'll --

18 we'll refer to Exhibit 29, of which you have a hard

19 copy. If there is any issue that relates to an

20 errata, we can go -- we can go there. 09:45:04

21 But I take it from your earlier testimony

22 that you feel comfortable saying that you drafted

23 the entirety of your expert report?

24 A. Correct.

25 Q. All right. And you drafted your erratas? 09:45:24

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1 A. Uh-huh, that's correct. 09:45:26

2 Q. Have you had any communications about
3 Apple with any governmental agency or regulator,
4 whether U.S. or foreign?

5 A. I -- I have not. 09:45:40

6 Q. Let's also, while we're at it, mark the
7 document in which you listed your relied-upon
8 materials. That also will show up electronically.

9 (Exhibit 31 was marked for identification
10 by the court reporter and is attached hereto.) 09:46:00

11 MR. SWANSON: We'll have it marked as
12 Exhibit 31. It's a document title which is
13 "Documents Relied Upon for Expert Class
14 Certification Report of Professor
15 Nicholas Economides, June 1, 2021." 09:46:09

16 Q. (By Mr. Swanson) So when that pops up on
17 the screen, if you can just confirm that that is
18 what it appears to be.

19 A. Yes, that's correct.

20 Q. Okay. With respect to this document, 09:46:32
21 Exhibit 31, to the best of your knowledge, does
22 this set forth all documents and information that
23 you relied on in connection with forming the
24 opinions in your expert report?

25 A. That's correct. 09:46:47

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1 Q. Okay. And on the first page of 09:46:48

2 Exhibit 31, you list five depositions.

3 Do you -- do you see that?

4 A. Uh-huh, yes, I see that.

5 Q. Are -- are these the only depositions 09:47:01

6 that you rely on in connection with your opinions?

7 A. I believe so. I mean, if there is a

8 error, I will try to fix it in the future.

9 Q. Okay. You note that you relied on the
10 deposition of Ned Barnes. Are you aware that he 09:47:22

11 gave trial testimony in the Epic case?

12 A. Yes, I'm aware of it.

13 Q. Do you rely on that?

14 A. I only rely on the stuff that I -- that
15 is in the list. I believe I have glanced at his 09:47:37

16 trial testimony as well, but I rely -- the

17 documents I relied are written in -- in that list.

18 Q. Did you review and rely on any written or

19 oral testimony from the Epic trial, setting aside

20 that of Mr. Barnes? 09:48:04

21 A. Say that again. I didn't hear you

22 100 percent.

23 Q. Sure.

24 Did you review and rely on any written or

25 oral testimony from the Epic trial, setting aside 09:48:14

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1 Mr. Barnes? 09:48:18

2 A. I have glanced at the transcript of the
3 proceedings, but I have not relied on them.

4 Q. Did you consider it to be unimportant to
5 review more thoroughly the proceedings in the Epic 09:48:35
6 trial?

7 MR. HARRINGTON: Objection to form.

8 THE DEPONENT: Well, the -- the trial was
9 not 100 percent on the issue that we are discussing
10 today. So I -- I looked at some of the proceedings 09:48:52
11 to understand better that issue, but I wouldn't say
12 it's unimportant, but at the same time, I put
13 forward the materials I relied on.

14 Q. (By Mr. Swanson) Okay. And you rely on
15 the reports of Professor Elhauge and Mr. Tregillis; 09:49:20
16 is that correct?

17 A. That's correct.

18 Q. I take it you're relying on their final
19 reports, not any intermediate drafts?

20 A. Correct. 09:49:38

21 Q. Are you relying on any expert reports or
22 testimony of Dr. Evans?

23 A. I'm not relying on any specific testimony
24 from Dr. Evans. I have looked at his report as
25 well. 09:50:00

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1 Q. Okay. 09:50:00

2 A. His reports, I should say that plural.

3 Q. Yes. There were a number.

4 You do, in your own expert report, at

5 page 29, paragraph -- paragraph 55, refer to an 09:50:12

6 analysis presented by Dr. Evans.

7 Do you -- do you see that in your report?

8 A. Yes.

9 Q. Do you recall where that analysis

10 appeared? 09:50:33

11 A. Do I recall? Say it again.

12 Q. Do you recall where exactly that analysis

13 appeared? Was it in one of his expert reports?

14 A. I believe so.

15 Q. Okay. And are you relying on that 09:50:46

16 analysis of Dr. Evans?

17 A. I'm not relying on that analysis. I'm --

18 if you -- if you see carefully the paragraph 55, it

19 notes -- it notes the differences between my

20 analysis and the analysis presented by Dr. Evans. 09:51:08

21 Q. Okay. Are you relying on any expert

22 reports or testimony of any expert in the Epic

23 case, setting aside Dr. Evans?

24 A. No, I am not.

25 Q. In your -- in your relied-upon list, 09:51:34

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1 Exhibit 31, you list some Bates-numbered documents. 09:51:36

2 Those would appear starting on page 6, page 6 and
3 page 7.

4 Did -- did you review all those
5 documents? 09:51:54

6 A. I am trying to find them. You said it's
7 on page 6?

8 Q. Yes, page 6, and I think there's one on
9 the top of page 7.

10 A. Uh-huh. I -- I believe I have read most 09:52:10
11 of the documents. Sometimes there may have been
12 summaries presented -- created by the staff on --
13 on those documents that I have read.

14 Q. All right. And then did you rely on any
15 findings of government investigations? There's a 09:52:32
16 reference to that in paragraph 8 of your report.

17 A. I have not relied on the government
18 investigations, but I'm aware of them.

19 Q. And which investigations are you
20 referring to? 09:53:04

21 A. I believe there is an investigation in
22 the European Union that crosses my mind at this
23 point. It's conceivable there were others that
24 I -- that I don't remember at this point.

25 Q. Okay. And are you relying on public 09:53:17

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1 reports of any investigation? 09:53:26

2 A. No.

3 Q. What -- what sorts of information do you
4 have about any investigations then, if not public
5 reports? 09:53:34

6 A. Well, the source would be that, but as I
7 said, I'm not relying on them.

8 Q. Okay. Fair enough. Understood.

9 Do you rely on any interviews with any of
10 the named plaintiffs in the developer class? 09:53:50

11 A. No.

12 Q. Have you communicated with any of them?

13 A. No.

14 Q. Do you know who they are?

15 A. Well, I've seen some names, but I 09:54:05
16 don't -- I -- I don't know them personally. I --
17 I -- I don't know -- I know them just as named
18 plaintiffs on the class.

19 Q. Okay. Have you interviewed any other
20 developers in connection with forming your opinions 09:54:21
21 in the case?

22 A. I -- I haven't interviewed any
23 developers.

24 Q. Did you interview anyone at all in
25 connection with the case? 09:54:34

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1 A. I don't think -- I don't believe so, no. 09:54:37

2 Q. Okay. Did counsel provide any
3 assumptions that you relied on in forming your
4 opinions?

5 A. No, counsel did not instruct me to do 09:54:51
6 something, so not do other things in terms of
7 assumptions in the economic models.

8 Q. Have you been retained as an expert in
9 any other cases involving apps or app stores or
10 operating systems? 09:55:10

11 A. I don't believe so, no.

12 Q. Okay. When were you retained on behalf
13 of the developer class?

14 A. Did you say "when"?

15 Q. Yes. I said "when." 09:55:25

16 A. Okay. I believe about a year ago.

17 Q. Would it have been sometime around
18 December?

19 A. You mean -- I -- I don't remember
20 exactly, to tell you the truth. I mean, I just -- 09:55:44
21 I -- I don't recall exactly when I -- I would say
22 about a year ago.

23 Q. Okay. And who -- who retained you?

24 A. Hagens Berman.

25 Q. Okay. And who -- who did you deal with 09:56:00

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1 at Hagens Berman? 09:56:02

2 A. At the very earliest stage; is that what
3 you're asking?

4 Q. Yes.

5 A. I believe I talked to Rob Lopez. 09:56:13

6 Q. Uh-huh. Anyone else?

7 A. I also believe I -- I talked to Ben
8 Siegel and later on to other people at
9 Hagens Berman.

10 Q. Okay. What -- what assignment were you 09:56:34
11 given when you were retained?

12 A. I think this is in paragraph 8, which is,
13 "I have been asked to determine, taking the
14 defendants' antitrust liability as given, whether
15 damages to the plaintiffs in the class in this case 09:56:56
16 can be accurately determined using common evidence
17 and common methodology. To answer these questions,
18 I have analyzed documents and data produced by the
19 defendants, as well as deposition testimony,
20 industry studies, economic literature, the findings 09:57:10
21 of governmental investigations, and other publicly
22 available information."

23 Q. Are there any additional assignments that
24 you've taken on beyond what you've just recited
25 from paragraph 8 of your report? 09:57:24

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1 A. I don't believe so. 09:57:27

2 Q. What do you understand "taking the
3 defendants' liability as given" to mean?

4 A. Well, that is in paragraph 7. "The
5 plaintiffs allege that Apple excluded all other 09:57:47
6 firms from distributing apps and related digital
7 products to the U.S. owners of its iOS devices,
8 and as a result, Apple charged supracompetitive
9 commissions to developers for the sale of paid apps
10 and in-app products." 09:58:07

11 Okay. And that's the anticompetitive
12 action.

13 Q. So when you're assuming Apple's
14 liability, you're assuming that those allegations
15 are true and correct? 09:58:24

16 A. Yes, that was my assignment.

17 Q. As of what date are you assuming Apple is
18 liable in terms of the date of Apple's conduct?

19 A. Well, I -- I -- assuming from the time of
20 the beginning of the class action, which was 09:58:45
21 June 4th, 2015.

22 Q. Okay. Have you been asked to determine
23 whether Apple's alleged conduct injured every
24 developer in the class from that time forward?

25 A. Yes. 09:59:06

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1 Q. Are you assuming that Apple's conduct has 09:59:07

2 injured the named plaintiffs?

3 A. Yes.

4 Q. Are you assuming that Apple has injured

5 any other specific developer? 09:59:20

6 A. I'm assuming that the developers in the

7 class all got injured.

8 Q. Are you assuming that Apple's conduct has

9 had anticompetitive effects?

10 A. Yes. 09:59:43

11 Q. Are you assuming that Apple's conduct

12 lacks any procompetitive justifications?

13 A. Yeah, that's correct. I mean, I have,

14 you know, relied on -- on Professor Elhauge's

15 report on -- on those issues. 10:00:03

16 Q. Are you assuming that anticompetitive

17 effects outweigh any procompetitive justifications?

18 A. Again, I have relied on

19 Professor Elhauge's analysis of this issue.

20 Q. Okay. Looking at paragraph 7, which you 10:00:24

21 mentioned a moment ago.

22 What is your understanding of the means

23 by which, as plaintiffs allege, Apple excluded all

24 other firms from distributing iOS apps?

25 A. Well, I think there were various means. 10:00:48

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1 The developers are not able to distribute an app 10:00:51
2 unless it's done through the Apple Store.
3 Otherwise, they get excluded. They cannot do it,
4 for example.

5 Q. Are you -- I'm sorry. 10:01:25

6 Do you understand plaintiffs to be
7 alleging that Apple excluded competition by
8 requiring developers to submit their iOS apps to
9 the App Store for review?

10 A. I don't think it's just a matter of 10:01:39
11 review for whatever other reason. They -- the
12 problem is that the developers found out that
13 unless they pay this hefty commissions to -- to
14 Apple, they are not allowed to distribute their
15 apps. 10:01:57

16 Q. Do you understand plaintiffs to be
17 alleging that Apple excluded competition by
18 requiring the use of its in-app payment
19 functionality?

20 A. That was part of it. 10:02:11

21 Q. Are -- are you assuming that Apple is
22 liable for such conduct?

23 A. I have said that my assumption on
24 liability is based on Professor Elhauge's report
25 and I rely on that -- on that report. 10:02:27

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1 Q. Do you understand plaintiffs to be 10:02:34
2 alleging that Apple excluded competition by
3 prohibiting developers from telling consumers
4 inside their apps, that they can pay for in-app
5 digital products outside the app? 10:02:44

6 A. I -- I think that was one of the
7 allegations, yes.

8 Q. Okay. And you're assuming that Apple is
9 liable for such conduct?

10 A. Again, I -- I'm relying on 10:02:54
11 Professor Elhauge's report for the findings of
12 liability.

13 Q. When you say you're relying on
14 Professor Elhauge, are you saying that you are
15 accepting induction for his conclusions, or are you 10:03:13
16 saying you just assume that what he says is
17 correct?

18 MR. HARRINGTON: Objection to form.

19 THE DEPONENT: Can you repeat that,
20 please. 10:03:26

21 Q. (By Mr. Swanson) Sure. I'll try it
22 again.

23 You've indicated in paragraph 8 of your
24 report that you've been asked to take Apple's
25 antitrust liability as given, right? 10:03:40

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1 A. Yes. Correct. 10:03:43

2 Q. You're assuming Apple is liable, correct?

3 A. Yes. Yes.

4 Q. And you say that you're relying on

5 Professor Elhauge's report. 10:03:59

6 Are you instead saying that you actually

7 have concluded that Apple is liable for

8 anticompetitive conduct, or are you just saying

9 that you're assuming Professor Elhauge is right?

10 MR. HARRINGTON: Objection to form. 10:04:12

11 THE DEPONENT: Well, I -- my task was --

12 is to assume liability for Apple and then go on

13 from there.

14 Now, the specific liability of Apple is

15 explained in detail in Professor Elhauge's report. 10:04:27

16 I did not replicate his report. I did not go into

17 every line of his analysis and say, well, that's

18 correct.

19 So I understand that his report

20 establishes liability and I go on from there. 10:04:55

21 Q. (By Mr. Swanson) Okay. Do you

22 understand plaintiffs to be alleging that Apple

23 excluded competition by requiring developers to

24 price their paid digital products using 99-cent

25 price tiers? 10:05:10

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1 A. I'm sorry. I -- I have to hear this 10:05:17

2 again. Sorry.

4	Do you understand plaintiffs to be	
5	alleging that Apple excluded competition by	10:05:23
6	requiring developers to price their paid digital	
7	products using 99-cent price tiers?	

12 Q. Well, are -- are you assuming that Apple
13 is liable for such 99-cent price-tiering conduct?

18 Q. So there are allegations in the complaint
19 that you are not assuming Apple is liable for; is
20 that correct? 10:06:31

23 Q. Well -- well, it's not --

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1 Q. Yeah. 10:06:45

2 You -- you understand that the plaintiffs
3 allege that 99-cent price tiering by Apple is
4 anticompetitive, correct?

5 A. This is one of the allegations in the 10:06:55
6 complaint, yes.

7 Q. But you're not assuming, for purposes of
8 your opinions, that Apple is liable for such
9 conduct, correct?

10 A. I think the -- the -- the important thing 10:07:12
11 here is that I'm -- I'm taking Professor Elhauge's
12 report on liability as the guide for the
13 anticompetitive behavior of Apple. And I do not
14 believe that this 99 cents issue was important or
15 crucial in the Einer Elhauge -- Professor Elhauge's 10:07:45
16 report. So in that sense, I am not focusing on
17 that issue.

18 Q. Well, do you assume that 99-cent price
19 tiers will continue to exist in the but-for world?

20 A. Well, given the way that 10:08:12
21 Professor Elhauge's report is written, it is
22 possible that they will continue, and it's possible
23 they wouldn't. I am, to -- to a significant
24 extent, agnostic on this.

25 Q. Well, your -- your but-for world either 10:08:36

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1 assumes that they exist or they don't, right? 10:08:42

2 A. Well, my job was to calculate damages.

3 And the calculation of damages that I have done

4 does not depend in a crucial way on this issue.

5 Q. So you've only focused on aspects of the 10:09:04

6 but-for world that will affect damages in a crucial

7 way; is that your testimony?

8 MR. HARRINGTON: Objection to form.

9 THE DEPONENT: I -- I -- I don't think I

10 said that. I mean, I'm saying -- maybe we can 10:09:15

11 reread my answer. But I'm -- but I'm -- I'm saying

12 that the calculation of damages I have done does

13 not depend on the 99-cent issue. Okay. And -- and

14 that's an absolute statement. Not crucial. Not

15 anything. 10:09:37

16 Q. (By Mr. Swanson) So your opinions would

17 not change if the finder of fact determined that

18 Apple's 99-cent price tiers were perfectly lawful

19 and were not anticompetitive?

20 A. My calculation of damages would still 10:09:53

21 stand the same way.

22 Q. And if the finder of fact determined that

23 the 99-cent price tiers indeed were anticompetitive

24 and, therefore, would be absent from the but-for

25 world, your opinions would remain exactly the same? 10:10:09

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1 A. That's correct. 10:10:14

2 Q. Is it your opinion that there is common
3 impact on the class from the conduct at issue?

4 A. Yes.

5 Q. You're offering the opinion that Apple's 10:10:29
6 alleged conduct injured 100 percent of developers
7 in the class?

8 A. That is correct.

9 Q. So you're -- you're not offering a lesser
10 opinion, that Apple's conduct injured virtually all 10:10:44
11 members, but not all members of the class?

12 MR. HARRINGTON: Objection to form.

13 THE DEPONENT: My opinion is that it
14 injured all members of the class.

15 Q. (By Mr. Swanson) Okay. Have you 10:10:58
16 quantified any minimum amount of injury that every
17 developer has incurred?

18 A. I -- I have -- I have quantified the --
19 the average industry -- I'm sorry -- injury in --
20 in -- for every member of the class. But I also 10:11:15
21 have expressed the opinion that every member of the
22 class has been harmed.

23 Q. Okay. And -- and have you quantified a
24 minimum amount of harm that every member of the
25 class has experienced? 10:11:31

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1 A. I -- I think I answered that question. 10:11:35

2 Q. I think you said you calculated an
3 average and that you've opined that every developer
4 was injured.

5 I'm asking you, what minimum amount of 10:11:45
6 injury you've calculated, if any?

7 A. Well, when we say we -- everyone was
8 injured, that means everyone was injured some
9 amount of money, like at least 1 cent, you know.

10 If you're asking me does a calculation 10:11:59
11 say it's exactly 1 cent or 10 cents, or something
12 like that, the answer is no. But the fact that
13 everyone was injured is there, in my economic
14 opinion.

15 Q. Yeah. 10:12:14

16 I'm asking the question of what the
17 minimum is.

18 Is it 1 cent? Is that all you can say?

19 A. Yes.

20 Q. Okay. Do you understand 10:12:20
21 Professor Elhauge to offer the opinion that Apple's
22 conduct injured 100 percent of the members of the
23 alleged developer class?

24 A. Yes.

25 Q. Do you rely on Professor Elhauge's 10:12:37

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1 opinion on that point? 10:12:40

2 A. No. I -- I rely on my own analysis and
3 my economic analysis for that very similar
4 statement or same statement.

5 Q. If Professor Elhauge turns out to be 10:12:51
6 incorrect in his opinion on class by injury, would
7 you still hold your own opinion?

8 A. If he turns out to be wrong on what
9 opinion?

10 Q. His opinion that 100 percent of class 10:13:08
11 members have been injured by Apple's conduct.

12 A. Yes, of course, I will stay with my
13 opinion because my opinion is independently derived
14 and it's reliable. It's done through the usual,
15 well-established economic methods. And I would 10:13:28
16 rely on my opinion as an economist, not on
17 Professor Elhauge's opinion that you mentioned.

18 Q. So is it -- is it your understanding that
19 you and Professor Elhauge have used different
20 methods to reach the same conclusion? 10:13:47

21 A. I -- I'm -- now you're -- you're
22 stretching my memory to -- to -- to remember
23 exactly what method Professor Elhauge used.

24 I know my own method very well and I am
25 very confident in it. And, again, it's a reliable 10:14:02

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1 economic standard, economic method to reach those 10:14:09
2 conclusions.

3 Q. Do you -- do you know if
4 Professor Elhauge used standard economic methods to
5 reach his conclusion that 100 percent of the class 10:14:22
6 members have been injured by Apple's alleged
7 conduct?

8 A. I expect so.

9 Q. Do you and Professor Elhauge use the same
10 measure of harm? 10:14:36

11 A. I'm not sure what you mean.

12 MR. HARRINGTON: Objection. Form.

13 Q. (By Mr. Swanson) Well, are you working
14 with an economic measure of harm in this case?

15 A. Sure. I calculate damages, correct. 10:14:54

16 Q. What -- what is your measure of harm?

17 A. Well, I -- I am calculating, you know,
18 very briefly the average price that would exist in
19 the but-for world and compare it with the fees, the
20 commissions, that Apple charges in the present 10:15:18
21 world, in the actual world.

22 Q. Is that an -- an overcharge measure of
23 harm?

24 A. You can call it an overcharge measure of
25 harm. Yes, you can. 10:15:31

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1 Q. Is it -- is it a lost profits measure of 10:15:34
2 harm?

3 A. It can also be thought of as a lost
4 profits measure of harm because the way I do the
5 calculation, it takes into account costs or 10:15:45
6 variable costs of the developers. And, therefore,
7 if the fixed costs were the same, the overcharge
8 would translate to lost profits.

9 Q. Is the overcharge that you measure the
10 entirety of the lost profits of the developers in 10:16:09
11 the class?

12 A. It's a conservative measure of the -- of
13 the profits for -- I'm sorry, of the lost profits
14 for every member in the class. So this is
15 explained in more detail in paragraph 64, and, 10:16:29
16 yeah, that the -- that every member of the class
17 would have lost the amount that I calculate.

18 Q. Okay. We'll come back to paragraph 64.

19 Are you familiar with the term
20 "sideloading"? 10:17:00

21 A. Yes.

22 Q. Are plaintiffs alleging that Apple
23 excluded competition by not designing iOS devices
24 to allow sideloading?

25 A. I -- I think sideloading might be a 10:17:13

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1 the term "but-for world"? 10:19:22

2 A. A but-for world would be a world without
3 the anticompetitive actions of Apple, without the
4 restrictions that we just discussed.

5 Q. And what is the time frame of your 10:19:32
6 but-for world?

7 A. Well, the time frame for -- for this
8 report is from the beginning of the class action
9 that is from June 4th, 2015.

10 Q. Okay. And what's the first event in the 10:19:48
11 but-for world that differs from the actual world?

12 MR. HARRINGTON: Objection to form.

13 THE DEPONENT: I'm -- can you rephrase
14 this. I -- I don't understand what the first --
15 you know, tell me again. I don't know -- ask 10:20:01
16 again, please.

17 Q. (By Mr. Swanson) Okay. Well, the
18 but-for world is different from the actual world,
19 right?

20 A. Correct. 10:20:08

21 Q. What's the first thing that is different
22 in the but-for world in -- in time?

23 MR. HARRINGTON: Objection to form.

24 Q. (By Mr. Swanson) What's the earliest
25 difference between the two worlds? 10:20:18

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1 MR. HARRINGTON: Same objection. 10:20:20

2 THE DEPONENT: I -- I -- I -- I have a
3 hard time answering that question because the
4 but-for world is a world without restrictions. I'm
5 not sure what exactly you're asking. 10:20:32

6 Q. (By Mr. Swanson) Well, what --

7 A. You're asking -- yeah, go ahead.

8 Q. In the but-for world, what happens on
9 June 4th, 2015? What -- what changes in Apple's
10 behavior occur on that day? 10:20:45

11 MR. HARRINGTON: Objection to form.

12 THE DEPONENT: Well, what I'm asking --
13 what I'm considering is the world without
14 restrictions on June 4th, 2015. Whether the
15 but-for world was exist -- preexistent on June 3rd,
16 2015 or not, I don't consider. This is not my
17 issue. 10:20:57

18 Q. (By Mr. Swanson) All right. So what are
19 you assuming is different on June 4th, 2015, that
20 is your issue? 10:21:12

21 A. That there is no anticompetitive actions
22 of Apple and that there is distribution through --
23 the unencumbered distribution through stores by
24 other parties. And also through direct downloads
25 from developers. 10:21:33

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1 Q. So is it your opinion that on June 4, 10:21:36
2 2015, multiple competitors all of a sudden appear
3 and compete with Apple?

4 A. Well --

5 MR. HARRINGTON: Objection to form. 10:21:45

6 THE DEPONENT: Well, I mean, what did I
7 say, Mr. Swanson? I already said that I don't
8 discuss the regime of June the 3rd.

9 Therefore, this kind of discussion of how
10 June 4th happen -- change from June 3rd doesn't 10:21:59
11 really make sense to me. It's not part of what my
12 report is.

13 Q. (By Mr. Swanson) How long does it take a
14 competitor to enter in the relevant market?

15 A. Well, that's a good question. A 10:22:15
16 competitor might be a store, and then it would be
17 to create demand on both sides of the market, that
18 is, developers coming to the store, customers
19 coming to the store.

20 Or it could be direct distribution. Now, 10:22:45
21 direct distribution happens without any
22 restrictions. But the other one, the setting up
23 the store takes -- might take some time because of
24 the -- of the -- of bringing in both sides of the
25 market. 10:23:01

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1 Q. Does your but-for world involve any 10:23:03

2 redesign of the iPhone or the iPad?

3 A. I don't believe so.

4 Q. Does your but-for world involve any

5 changes to the iOS operating system? 10:23:16

6 A. The "iLS" means?

7 Q. iOS operating system.

8 A. I'm sorry, "iOS." Sorry, sometimes

9 I -- I -- maybe it's the Zoom connection, I miss

10 what you're saying, so if you can try to say it 10:23:27

11 slightly slower, then for sure I will -- I will get

12 it.

13 Q. Okay. Does your but-for world involve

14 any changes to the iOS operating system?

15 A. I -- I'm not sure I completely understand 10:23:47

16 your question. The -- the operating system does a

17 lot of things. It -- my but-for world would

18 require that stores are allowed. That probably

19 would -- would mean that in some way, the -- the

20 Apple operating system would allow them to exist. 10:24:13

21 So, that slight change would be

22 necessary, and also the -- that the possibility for

23 self-distributing apps to work with the iOS

24 should be there.

25 Q. In your but-for world, do any companies 10:24:32

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1 other than Apple make and sell iPhones? 10:24:36

2 A. No.

3 Q. So your but-for world assumes Apple is
4 the exclusive producer of the iPhone, correct?

5 A. Yes, my but-for world is only about 10:24:52
6 distribution of apps. It doesn't -- it doesn't
7 talk about competition between iOS devices and
8 other devices.

9 Q. Do you have an opinion as to whether
10 there's anything anticompetitive about Apple being 10:25:11
11 the exclusive maker and seller of iPhones?

12 A. I'm not sure I understand the question.
13 Apple is, by definition, the -- the -- the provider
14 of these phones. That by itself is not
15 anticompetitive. 10:25:32

16 Q. Why -- why is it, by definition, the
17 provider of the phones?

18 A. Well, because when you get these phones,
19 they say Apple own them. They are -- they are the
20 main product of -- of the Apple Corporation. 10:25:43

21 Q. But what prevents another company from
22 making an identical phone?

23 A. Well, there are similar phones, but
24 identical in the sense of having the name Apple on
25 them, you know, they would -- they would have 10:26:02

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1 intellectual property issues. 10:26:08

2 Q. Does Apple have intellectual property
3 rights in the iOS operating system?

4 A. I'm sure they do.

5 Q. You're not assuming that any of Apple's 10:26:19
6 intellectual property rights with respect to the
7 operating system are invalid, are you?

8 A. No, I'm not.

9 Q. Please turn to paragraph 10 of your
10 report. 10:26:37

11 A. Yes, thank you.

12 Q. I'm focusing on a sentence maybe two or
13 three sentences in, that reads, "Economic logic and
14 the evidence in this case indicate that the Apple
15 App Store would have faced substantial competition 10:27:06
16 in the but-for world."

17 Do you see that?

18 A. I think we might not be in paragraph 10.
19 I think you're in paragraph 9.

20 Q. No, page 5, toward the middle of 10:27:21
21 paragraph 10. Maybe -- maybe the sentence appears
22 twice.

23 A. Let me read more carefully, thank you.

24 Yes, I see. "Economic logic and the
25 evidence in this case indicate that the Apple 10:27:45

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1 App Store would have faced substantial competition 10:27:47
2 in the but-for world."

3 Q. Okay. Is it your view that even in the
4 light of economic logic and the evidence in the
5 case, that there is no way to know which specific 10:28:03
6 companies would have entered the iOS app
7 distribution market by launching app stores, in the
8 but-for world?

9 A. That's correct, uh-huh, yes.

10 Q. Okay. And you agree that there is no way 10:28:16
11 to know which specific companies would have entered
12 the iOS app distribution market by
13 self-distributing apps in the but-for world?

14 A. Yes, unfortunately there was no period in
15 which competition in the app distribution existed 10:28:31
16 in the App Store except for those kind of isolated
17 event of Cydia, so we don't have an earlier period
18 to use as a benchmark for these comparisons. So
19 the only possibility is to use yardsticks from
20 other markets. 10:29:05

21 Q. In paragraph 11, which is further down on
22 page 5, you state that, "There are several
23 companies that have the organizational and
24 technical capabilities to enter the iOS app
25 distribution market." 10:29:22

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1 Do you see that? 10:29:25

2 A. Yes, that's correct.

3 Q. What -- what organizational and technical

4 capabilities are required to enter the iOS app

5 distribution market, in your opinion? 10:29:32

6 A. Well, I mean, for example, in one of the

7 yardstick I -- yardsticks I use, I use app stores

8 in the PC world distribution, and these app stores

9 have been organized and existed for a number of

10 years in this app -- PC app distribution world. 10:29:55

11 So clearly they have managed to surpass

12 the technical hurdles of having an app store and

13 the various other business hurdles that they might

14 have in having an app store.

15 Q. And what -- what particular companies 10:30:21

16 have had app stores for several years?

17 A. Well, if -- if you go to my first

18 yardstick, there is a -- there is a list of stores,

19 for example Steam, Epic, Blizzard Activision,

20 Microsoft Excel, and so on. 10:30:44

21 Q. And let's focus on Epic. When Epic

22 entered the PC store, it had no history of having

23 operated -- having operated a store before that,

24 correct?

25 A. Yes, as far as I remember. 10:31:04

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1 Q. Okay. So what -- what technical and 10:31:08
2 organizational capabilities did Epic have that
3 allowed it to open up an App Store?

4 A. Well, you know, you get a number of the
5 stores. For example, Steam has been there a large 10:31:25
6 number of years. Epic. Blizzard. Origin and so
7 on.

8 These companies, by the fact that they're
9 there, seem to have sold this kind of
10 organizational type of issues of how to set up 10:31:42
11 themselves as distributors.

12 Q. Are there any other organizational or
13 technical capabilities that you can think of that
14 are necessary to enter the but-for world for market
15 in this case? 10:32:13

16 MR. HARRINGTON: Objection to form.

17 THE DEPONENT: I am not sure I -- I
18 understand 100 percent your question.

19 What I'm saying is that these stores that
20 I have, for example, in table 4 of my report seem 10:32:25
21 to have solved the issue of setting up a store and
22 distributing apps for the P -- the Windows PC world
23 so they could can easily take that capability and
24 use it in a different market; for example, the
25 iOS market. So -- because the issues are going to 10:32:53

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1 be -- the various organizations that set up issues 10:32:58
2 are going to be similar.

3 Q. (By Mr. Swanson) You know, I -- I
4 understand you're saying that they -- they've
5 solved -- I'm just asking you what those 10:33:07
6 capabilities are.

7 What -- what are the technical
8 capabilities?

9 A. I'm not sure I understand 100 percent
10 your -- your -- your question. 10:33:18

11 I assume that some store like Steam or --
12 or Epic has the possibility of talking to the
13 developers, bringing in the -- the -- the app,
14 setting up a system to download a system, setting
15 up a system for payment. It's pretty normal stuff. 10:33:40
16 And they -- they have been able to do them in the
17 PC -- in the Windows PC world. They should be able
18 to do them in the iOS world.

19 Q. In paragraph 11, at the bottom of
20 page 5 -- it's actually a part of the sentence that 10:33:57
21 carries over to the top of page 6 -- but you say at
22 least one of those companies has asked Apple to
23 allow it to enter the iOS app distribution
24 market.

25 Which company you are referring to? 10:34:13

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1	A. This is in footnote 6. It's described	10:34:14
2	there.	

8 Q. Okay. And that was on June 30, 2020?

11 Q. Okay. And are you aware of any company
12 that had asked Apple to allow it to enter the iOS
13 app distribution market before June 30, 2020?

18 Q. Okay. Aside from the possible -- the
19 possibility of Cydia, is there any other entity
20 that you're aware of that asked Apple to allow it 10:35:23
21 to enter the iOS app distribution market before
22 June 30, 2020?

25	Q. Okay. When -- when would Epic have	10:35:38
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1 entered the but-for marketplace, in your opinion? 10:35:44

2 MR. HARRINGTON: Objection to form.

3 THE DEPONENT: Well, we had this

4 discussion a few minutes ago.

5 There is -- the but-for world that I'm 10:36:05

6 examining starts on -- I believe it was 2015,

7 June 4th. I'm not claiming that before

8 June 4th, 2015, the world was different and the

9 but-for world didn't exist. So this kind of

10 temporal questions you're asking are -- are missing 10:36:29

11 the point.

12 I'm not talking about a transition. So

13 I'm talking about a description of the but-for

14 world. But for my purposes and my analysis of this

15 report, this -- this description of the but-for 10:36:44

16 world is from June 4th, 2015. I'm not claiming

17 that before that the world was different.

18 And -- and, therefore, this kind of

19 questions when -- what happened on June 3rd -- I

20 mean, don't make so much sense to me. 10:37:00

21 MR. SWANSON: We've been going for a

22 little bit over an hour.

23 Should we take a break?

24 THE DEPONENT: Sure. Thank you.

25 MR. HARRINGTON: Good with me. 10:37:12

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1 MR. SWANSON: Back in ten? 10:37:13

2 THE DEPONENT: Yeah. Sure.

3 THE VIDEOGRAPHER: We are now going off
4 the record. The time is 10:37.

5 (Recess taken.) 10:37:21

6 THE VIDEOGRAPHER: We're now back on the
7 record. The time is 10:47.

8 Q. (By Mr. Swanson) Professor, could you
9 turn to paragraph 14 of your report, please, on
10 page 7. 10:47:40

11 A. Yes.

12 Q. Here you state that "If Apple were to
13 allow alternative app stores on iOS, there are
14 several firms well-positioned to enter the market,
15 some of whom have even asked Apple to allow them to
16 operate an app store." 10:47:56

17 Is this a reference again to Epic?

18 A. I don't recall other companies having
19 asked. But that's something that I am not
20 100 percent sure so maybe it's further to 10:48:18
21 subject -- it's subject for further investigation.

22 Q. Okay. But as you sit here, you're not
23 aware of any -- any firm, other than Epic, that has
24 asked Apple to allow them to operate an App Store?

25 A. As I sit here, that's correct. 10:48:39

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1 Q. Okay. Now, in paragraph 14, you refer to 10:48:40
2 some others beyond Epic.

3 You refer to Amazon, Samsung, Aptoides,
4 and you refer to "other smaller firms that already
5 operate about your Android App Stores." 10:49:01

6 As far as you know, none of those asked
7 Apple to allow them to operate an App Store on
8 iOS?

9 A. As far as I know, they haven't asked.

10 Q. Okay. And you also refer in paragraph 14 10:49:12
11 to Steam, Microsoft, and Blizzard and Activision.

12 Did -- did any of those firms ask Apple
13 to allow them to --

14 A. I don't think --

15 (Simultaneously speaking.) 10:49:27

16 Q. (By Mr. Swanson) -- to open an iOS App
17 Store?

18 A. I'm -- I'm sorry. Sorry I interrupted
19 you.

20 I mean, I don't believe that they have 10:49:32
21 asked. But at the same time, Apple has set up
22 rules that -- from the beginning of the app -- of
23 the Apple App Store have said that nobody else
24 can -- can have an app store. So I'm -- it's kind
25 of not surprising that they haven't asked. Because 10:49:58

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1 | they probably already know the answer. 10:49:59

3	A. Yes. Thank you.
---	--------------------

5	You indicate here that "the history of	10:50:30
---	--	----------

7 | from the beginning there were firms that could have

9 Apple's acceptance) ."

11	A. From the beginning means from even before
----	--

13 App Store, there was this company, Cydia, that was

15	Q. And is Cydia the -- the entity that was	10:51:11
----	--	----------

17	A. Yes.
----	---------

19 paragraph 12; is that -- is that correct?

21 Q. And you indicate that "Cydia, had until

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23 | distribution for iOS devices since the first iPhone
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```
25 | 'jailbreaking'"? 10:51:44
```


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1 A. Yes. That's what is written there, yes. 10:51:47

2 Q. What -- what -- what were Cydia's terms
3 for paid distribution?

4 A. I -- I -- I do not recall.

5 Q. Okay. In your opinion, would 10:51:56
6 jailbreaking be a characteristic of the relevant
7 market in the but-for world?

8 MR. HARRINGTON: Objection. Outside the
9 scope of the opinions the professor has offered.

10 THE DEPONENT: The way that I have 10:52:12
11 calculated damages was for stores and individual
12 developers selling apps without jailbreaking,
13 without having to alter the operating system of
14 the -- the iOS operating system.

15 Q. (By Mr. Swanson) In your opinion, in the 10:52:44
16 but-for world, will Apple block jailbreak methods
17 as part of operating system updates?

18 A. Sorry. I -- I missed this. You have to
19 speak slightly slower because of Zoom.

20 Q. I'll -- I'll repeat it. No problem. 10:52:58
21 In your opinion, in the but-for world,
22 will Apple block jailbreak methods as part of
23 operating system updates?

24 A. Most likely.

25 Q. In paragraph 13 of your report, you state 10:53:16

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1 that Apple never allowed Cydia "to compete on the 10:53:23
2 merits."

4	A. Yes.
---	---------

7 A. Well, Cydia could not have legitimate
8 within the rules of -- of -- of Apple Store --
9 could not set up an app distribution store because
10 Apple claimed exclusivity on this. That only Apple 10:53:57
11 could distribute the apps.

18 Q. Well, is it your opinion that Cydia
19 wanted to only distribute apps that functioned on
20 an unaltered iOS operating system? 10:54:38

23 Q. Do you know that Cydia distributed apps
24 that actually altered the operating system's
25 characteristics, don't you? 10:54:51

1 A. I do. 10:54:53

2 Q. Wasn't that Cydia's business method?

3 A. Well, maybe that was Cydia's business

4 method under the constraints imposed on it by Apple

5 not allowing it to distribute in a straightforward 10:55:04

6 legitimate way without jailbreaking.

7 We really don't know what the world would

8 have been if Apple had allowed Cydia to operate a

9 competing store without jailbreaking a competing

10 store to the -- to the Apple App Store. 10:55:25

11 Q. On page 6 of your report, your

12 heading 1 reads "Early App Stores Were Successful

13 Despite Technical Barriers."

14 Are you referring to Cydia?

15 A. Yes. 10:55:46

16 Q. Are you referring to any other early

17 App Store?

18 A. Not that I can recall at this point.

19 Q. Okay. Are you saying here that Cydia was

20 successful? 10:55:55

21 A. Well, at some point in time, in its early

22 days. I -- I have read the -- the statistic that

23 Cydia was used by over 5 percent of the -- of the

24 owners of iPhones. So that, I would say, is

25 successful. 10:56:24

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1 Q. Was Cydia profitable? 10:56:25

2 A. I do not know that.

3 Q. Okay. Do you know if Cydia was
4 attempting to be profitable?

5 A. I'm not sure I understand the question. 10:56:33
6 Every company attempts to be profitable.

7 Q. Well, nonprofit companies don't attempt
8 to be profitable, do they?

9 A. I -- I'm not sure. I -- I wouldn't be
10 able to answer that -- that question. I mean, this 10:56:46
11 wasn't crucial for my -- for my work.

12 Q. Please turn to paragraph 15 of your
13 report on page 8.

14 A. Yes.

15 Q. You state here that, "There are a wide 10:57:13
16 variety of developers of PC apps that
17 self-distribute their apps."

18 Do you see that?

19 A. Yes.

20 Q. What -- what do you mean by 10:57:24
21 "self-distribution"?

22 A. "Self-distribution" means they have a
23 site in which individuals like you and me can
24 download the programs and install them on a PC.

25 Q. So does self-distribution in the context 10:57:53

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1 of iOS mean a developer would make its iOS app 10:57:56
2 available for download from its own website?

3 A. It -- you know, it could be its own
4 website or it could be a store in -- an app store
5 for iOS, but as we have already said, these 10:58:21
6 stores don't exist right now, so we're talking
7 about the but-for world in which the -- the
8 companies could set up stores, and some of the
9 stores might sell a whole bunch of different apps
10 and some stores might sell the specific app of that 10:58:37
11 company. And -- or at least start with that and
12 see what happens by attracting other -- other --
13 other -- other apps.

14 Q. I'm just trying to understand what --
15 what you mean by the term "self-distribution." 10:58:59

16 So that term at least includes a
17 developer making an iOS app available for
18 download from its own website?

19 A. It can include that, but it doesn't have
20 to be that. It could be also -- how can I call 10:59:16
21 it -- small store of that company in -- if -- if
22 and when app stores are allowed, competing app
23 stores to Apple, are allowed for the Apple iOS.

24 Q. Does self-distribution as you use the
25 term include a developer allowing consumers to 10:59:42

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1 purchase digital content from its own website that 10:59:45
2 can be consumed in the developers's iOS app?
3 A. Could I hear it one more time.
4 Q. Sure.
5 Does self-distribution as you use the 10:59:58
6 term include an iOS developer allowing consumers
7 to purchase digital content from its own website
8 that can be consumed in the developers's iOS app?
9 A. Yes, it can include that.
10 Q. Okay. You are aware that happens in the 11:00:15
11 actual world?
12 A. It happens with some restrictions. There
13 are restrictions the way that -- that that happens
14 in the actual world.
15 Q. Does self-distribution generate the same 11:00:32
16 services for a developer as inclusion in the
17 App Store?
18 A. Well, that's a good question, because I
19 think a lot depends on whether we're talking about
20 the actual world right now versus the but-for 11:00:57
21 world.
22 In a but-for world in which there could
23 be a number of competitors, another -- a number of
24 competing stores towards Apple, then typically a
25 company might want to distribute through all of 11:01:22

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1 these stores. 11:01:26

2 So if, for example, Steam and Epic had a
3 store in Apple -- in the Apple iOS, then my app,
4 third-party app, might be interested to list itself
5 in each one of these stores. 11:01:51

6 So it could list itself with Epic, it
7 could list itself with Steam, it could list itself
8 with Apple. And I expect many of -- of the
9 third-party apps could do something like that.
10 And, of course, they can have their own 11:02:08
11 self-distribution.

12 Q. When -- when in the but-for world
13 developer self-distributes, does it incur costs
14 that a developer transacting solely through a
15 third-party platform does not incur? 11:02:26

16 A. Well, it will have to set up its own
17 distribution setup, that is, have a -- the software
18 doing that, have the bandwidth required to be able
19 to -- to down -- for the -- for the customers to
20 download the app, and would have to -- have to set 11:02:56
21 up some payment system.

22 Now, all these are almost easy -- easily
23 to do off the shelf. I mean, it's not like you
24 have to invent a new payment system. It's not like
25 you have to invent a new bandwidth kind of 11:03:11

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1 distribution and so on. But there are going to be 11:03:17
2 these kind of costs, and later on we -- when I
3 present the -- the -- the self- -- the
4 self-distribution possibility, I do consider the
5 costs for self-distribution. 11:03:34

6 Q. And you consider what the fixed costs are
7 and what the variable costs are?

8 A. Correct.

9 Q. In -- can you take a look at footnote 3
10 on page 5 of your report? 11:03:49

11 A. Yes.

12 Q. You don't consider Web apps in your
13 report, correct?

14 A. I'm not sure what you mean by that?

15 Q. Well, you define the term "application" 11:04:14
16 to exclude Web apps, correct?

17 A. If you mean by Web apps things that don't
18 require the iOS -- they're not native -- native
19 applications but they are running on the Web?

20 That's correct. 11:04:36

21 Q. Okay. Do you exclude Web apps as a means
22 of self-distribution by a distributor -- or a
23 developer, I'm sorry?

24 A. Yeah, I'm -- I'm talking about the apps
25 which can run directly on iOS, not through the 11:04:52

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1 Internet. So we're talking about native apps. 11:05:01

2 Q. Back -- back in paragraph 15, page 8.

3 You refer to, "The small developers such as Subset

4 Games and Almost Human self-distribute their apps

5 using the Humble Widget combined with Steam keys"? 11:05:30

6 A. Yes, I -- you could say that.

7 Q. This would be an -- an example of a

8 developer transacting through a third-party

9 platform?

10 A. Yes. 11:05:54

11 Q. So is this really an example of

12 self-distribution?

13 A. Well, I mean, it's kind of -- kind of

14 hybrid in the sense that, you know, this is a --

15 the Humble Widget allows the -- the developer to -- 11:06:18

16 to self-distribute, and then there is this kind of

17 detailed mechanism, which is explained in

18 footnote 25, of how the Steam keys are used for --

19 for payment.

20 Q. Well, in these instances, the developer 11:06:44

21 itself is not engaging in the distribution

22 function, right?

23 A. Well, yes and no. I mean, in -- in some

24 way, the -- the Humble Widget is supposed to allow

25 the -- the developer to self-distribute but in -- 11:07:06

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1 in this very particular way that is described in 11:07:12
2 paragraph 15 in footnote 25.

3 Q. What is your definition of a small
4 developer? You used the term "small developer"
5 such as Subset Games and Almost Human. 11:07:28

6 A. Well, you know, I haven't -- I do not
7 have a specific definition. But, you know,
8 we're -- we're talking about relatively small
9 developers with small sales. We're not talking
10 somebody like Epic or Steam that has significant 11:07:48
11 sales of its own products.

12 Q. What proportion of the class would you
13 consider to be all developers in this sense of the
14 term that you use in paragraph 15?

15 A. I do not recall exactly how many. But I 11:08:11
16 would expect that a lot of the class are relatively
17 small.

18 Q. When did Steam first allow developers to
19 use Steam keys for distribution?

20 A. I do not recall. I can find out. 11:08:30

21 Q. When did the Humble Widget first become
22 available?

23 A. I do not remember exactly unless it's
24 written in some of the -- the footnotes here.

25 Q. Are you aware -- 11:08:47

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1 A. It's probably around 2015 or something of 11:08:50

2 that sort.

3 Q. But you're not sure?

4 A. I'm not sure, no. Well, there is a

5 footnote 56, which is an article from 2015, showing 11:08:58

6 that the Humble Widget -- Humble launches Humble

7 Widget, so it seems like it was there from about

8 that time.

9 Q. 2016?

10 A. 2015. 11:09:13

11 Q. I'm sorry, 2015 or 2016?

12 A. 2015.

13 Q. Okay. And are you aware that developers

14 with total billings below \$250 received nothing

15 from Humble Widget? 11:09:25

16 A. I'm not sure if this is factually

17 correct.

18 Q. Did you -- did you look into the Humble

19 Widget's terms of distribution?

20 A. I think I have looked at it at some point 11:09:39

21 in time, but I am not sure if your statement is

22 correct and if the \$250 doesn't get returned

23 eventually.

24 Q. Do you know how many developers in the

25 class had total revenues of \$250 or less? 11:09:51

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1 A. I do not recall off the top of my head. 11:09:59

2 Q. Okay. Are there not many thousands?

3 A. There are probably thousands, correct.

4 But I wouldn't be able to swear to a specific

5 number. 11:10:12

6 Q. Okay. You indicate that many developers

7 distribute their apps through multiple stores

8 and/or self-distribution, referring to PC

9 developers?

10 A. That's correct. 11:10:24

11 Q. What percentage of PC developers

12 distribute through multiple stores?

13 A. I wouldn't be able to -- to -- to give

14 you a number off top of my head -- on top of my

15 head at this point. 11:10:38

16 Q. Do you know if it's more than 10 percent?

17 A. As I said, I wouldn't be able to -- to

18 give you a number.

19 Q. Again, I'm asking for a magnitude, not a

20 number. 11:10:49

21 A. Well, I do not recall so I wouldn't be

22 able to answer that question.

23 Q. What percentage of developers on the PC

24 platform self-distribute their apps?

25 A. I believe a large number, but I wouldn't 11:11:13

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1 be able to say exactly how many. 11:11:15

2 Q. With respect to the but-for world, do you
3 have any methodology to identify iOS distributors
4 who can profitably self-distribute?

5 MR. HARRINGTON: Objection to form. 11:11:29

6 THE DEPONENT: Sure. I mean, this is
7 outlined in the report. We can go to specific
8 sections.

9 Q. (By Mr. Swanson) And where is it
10 outlined in the report? 11:11:40

11 A. Well, I mean, for -- for example, when we
12 talk about the various yardsticks, in the first
13 yardstick on the Windows PC stores, which is --
14 which are outlined in table 4, the -- the -- the
15 calculation there is that -- shows that the -- 11:12:02
16 these companies are -- are profitable in the
17 distribution in Windows PCs, and when I talk later
18 on about the profit yardstick, also I have specific
19 calculation of profits, making sure that they
20 are -- they are able to do this profitable -- 11:12:28
21 profitably. They are able to end up profitably.

22 Q. Okay. So -- so using your methodology,
23 you can identify which of the roughly
24 60,000 developers in the class could profitably
25 self-distribute in the but-for world? 11:12:47

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1 A. I -- I'm not sure this was the previous 11:12:50
2 question. I -- in -- in my examination of this,
3 it -- I show that in the but-for world, there would
4 be third-party stores and there would be
5 self-distribution, too. 11:13:10

6 So everyone -- every developer would have
7 the option to participate in the various stores and
8 in self-distribution. And I wouldn't be surprised
9 if a number of developers, or most of them,
10 participate in all venues of distribution. 11:13:29

11 Q. So is it your opinion that in a but-for
12 world almost every developer would find it
13 profitable to self-distribute?

14 A. I don't think I can say that. I think
15 that a lot of developers will self-distribute and 11:13:48
16 there are going to be others who are going to use
17 the third-party stores.

18 Q. And when you say "a lot of developers in
19 the but-for world will self-distribute," what
20 fraction of the 60,000? 11:14:07

21 A. You know, it's -- you know, we -- we
22 are -- we are -- we're talking about a but-for
23 world and the -- unfortunately, through the
24 anticompetitive actions of Apple, we don't even
25 have one single period of a competitive world to be 11:14:21

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25	Q. I'm asking you, as an economist, how do	11:15:50
----	--	----------

1 you define "monopoly power"? 11:15:52

2 A. You mean in principle?

3 Q. You're an economist, correct?

4 A. I'm an economist, yes.

5 Q. Okay. And as an economist, how do you 11:16:01

6 define "monopoly power"?

7 A. Well, it's the power to -- to affect

8 price or restrict competition.

9 Q. Would you agree that it is the power to

10 raise price profitably by restricting output? 11:16:24

11 A. That might be one way. There could be

12 others.

13 Q. Are you aware that the plaintiffs allege,

14 in the alternative, that Apple has abused monopsony

15 power as a bottleneck retailer? 11:16:42

16 A. I -- I do not recall the monopsony

17 discussion.

18 Q. How do you define "monopsony power" as an

19 economist?

20 A. Very similar to monopoly power, but from 11:16:52

21 the side of the -- of the buyer.

22 Q. Are you assuming that Apple is a

23 monopsonist?

24 MR. HARRINGTON: Objection to form.

25 THE DEPONENT: I -- I do not use this 11:17:05

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1 analysis in my -- I -- I have not used that in my 11:17:09

2 analysis.

3 Q. (By Mr. Swanson) Are you assuming that

4 Apple is a bottleneck retailer in your analysis?

5 A. I'm not completely sure I understand your 11:17:19

6 question.

7 Q. All I can do is repeat it.

8 Are you assuming that Apple is a

9 bottleneck retailer in your analysis?

10 MR. HARRINGTON: Objection to form. And 11:17:36

11 also beyond the scope of the opinions he's

12 offering.

13 MR. SWANSON: You know, that's a speaking

14 objection. So if that's going to continue, perhaps

15 we should have a discussion about it. 11:17:45

16 MR. HARRINGTON: Beyond -- which portion

17 of the objection do you think was a speaking

18 objection?

19 Beyond the scope?

20 MR. SWANSON: Well, yes. 11:17:54

21 MR. HARRINGTON: Okay.

22 THE DEPONENT: So -- I mean, to -- to --

23 to be -- to be fair to you -- I mean, I'm not

24 sure -- completely sure what you mean by -- by --

25 by these -- by these terms. 11:18:07

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1 What Apple has done is allowed 11:18:09
2 distribution of apps to happen only through its
3 App Store. And the but-for world I describe and
4 the damages I calculate are going away from that
5 and allowing multiple app stores and 11:18:26
6 self-distribution.

7 Q. (By Mr. Swanson) In your opinion, is
8 Apple a retailer of apps?

9 MR. HARRINGTON: Objection.

10 THE DEPONENT: Well, Apple right now does 11:18:44
11 the distribution of -- of apps.

12 Now, whether we call it retailer, which
13 might have a specific meaning for some people or
14 not, I don't care. I don't think that's crucial
15 for the calculation of damages that I do. 11:19:01

16 Q. (By Mr. Swanson) Are you aware -- well,
17 have you reviewed Professor McFadden's report in
18 the consumer case?

19 A. I -- I have glanced through it.

20 Q. Are you aware that Professor McFadden has 11:19:17
21 the opinion that Apple is a retailer of apps, as an
22 economic matter?

23 MR. BURT: Objection. Form.

24 THE DEPONENT: You are asking me to
25 comment on Professor McFadden's report? 11:19:31

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1 Q. (By Mr. Swanson) My question to you was 11:19:35
2 about your awareness.

3 Are you aware of that?

4 MR. BURT: Same objection.

5 THE DEPONENT: I do not recall it 11:19:41
6 100 percent, but I must have read it.

7 Q. (By Mr. Swanson) Okay. If you must have
8 read it, do you agree with it or disagree with it?

9 MR. HARRINGTON: Objection.

10 THE DEPONENT: I think, again, we're 11:19:54
11 getting into word definition here -- word
12 definitions.

13 Traditionally, a retailer is somebody who
14 gets a product, puts it on his shelf, and then
15 resells it. That's what traditionally retailing 11:20:09
16 means.

17 Now, Apple doesn't seem to be doing that,
18 you know. It doesn't take possession of the
19 product. It acts as an intermediary through the
20 App Store and brings together the -- the buyers and 11:20:25
21 the -- and the sellers. So that's why I think the
22 discussion on retailing and so on is a bit off the
23 subject.

24 Q. (By Mr. Swanson) Professor, are the
25 opinions that you provide in your report valid 11:20:39

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1 under both a monopoly theory of harm and a 11:20:45
2 monopsony theory of harm?

3 A. I am using the theory of harm, the
4 anticompetitive effects as explained by
5 Professor Elhauge and that's the crucial thing. I 11:21:02
6 mean, you can call it whatever you want.
7 "Monopoly," "monopsony," whatever.

8 The bottom line is that in the but-for
9 world, there would have been much more distribution
10 and people would have paid much less. And that's 11:21:18
11 what I'm calculating.

12 Q. So is it your opinion that damages would
13 be the same whether the theory of harm is a
14 monopoly theory or a monopsony theory?

15 A. I'm using the -- the theory of harm that 11:21:32
16 was developed by Professor Elhauge, and I start
17 from that. If there was some alternative theory of
18 harm, I wouldn't be able to say. I mean, I -- I
19 haven't done that, based on alternative theories of
20 harm. 11:21:47

21 Q. And your understanding is that the
22 Professor Elhauge has offered a -- a monopoly
23 theory of harm?

24 A. Yes.

25 Q. Do you agree that Apple's App Store is a 11:21:58

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1 two-sided platform? 11:22:03

2 A. The Apple App Store, as it is right now,
3 yes, it acts as a two-sided platform, correct.

4 Q. And do you agree that it would be a
5 two-sided platform in the but-for world as well? 11:22:17

6 A. Well, as a store like -- like Apple. So
7 it could be Epic's or Steam's would act as a
8 two-sided platform.

9 Q. Do you agree that a two-sided platform
10 offers different products or services to two 11:22:39
11 different groups who both depend on the platform to
12 intermediate between them?

13 A. Yes, I agree.

14 Q. Do you agree that the platform services
15 that Apple provides to developers and the services 11:22:54
16 it provides to consumers are not complements?

17 A. "Are not complements," you said?

18 Q. Correct.

19 A. I'm not sure I agree with that. I'm not
20 sure I understand what -- what you're talking 11:23:10
21 about.

22 Q. Well, as an economist, do you have an
23 understanding of the term "complements"?

24 A. Absolutely.

25 Q. What is your understanding? 11:23:21

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1 A. My understanding is a "complement" is -- 11:23:23
2 is a good that enhances -- is a good B, let's say,
3 that enhances what good A provides to a consumer.

4 Q. And how would you express that as an
5 economist in terms of cross-elasticity demand? 11:23:39

6 A. Well, I mean, economies tend to see
7 cross-elasticity of demand and tend to try to
8 understand what's the impact of changing the price
9 of one good on -- on the price of another.

10 So for example, if I was looking for the 11:24:00
11 cross-elasticity of demand between Diet Coke and
12 Diet Pepsi, I would say, well, suppose that
13 Diet Coke's price went up. Will the sales of
14 Diet Pepsi go up?

15 And if that turns out to be positive, 11:24:19
16 then we could call Diet Coke and Diet Pepsi
17 substitutes. Otherwise we would call them
18 complements.

19 So, again, it's -- if -- if they are
20 substitutes, this cross-elasticity of demand is 11:24:34
21 positive. Otherwise, for complements, it's
22 negative.

23 Q. Okay. So using that definition, do you
24 agree that the platform services that Apple
25 provides to developers and the services it provides 11:24:45

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1 to consumers are not complements? 11:24:47

2 A. Well, I'm not completely sure what you
3 mean by the App Store services.

4 Is that your -- your -- your question is
5 about the App Store or Apple, in general? 11:24:59

6 Q. Well, you -- unless I misheard you, you
7 just agreed that a two-sided platform offers
8 different products or services to -- to two
9 different groups.

10 A. Right. 11:25:12

11 Q. So do you understand the App Store to
12 offer two different groups different products or
13 services?

14 A. Well, you know, what does the -- a store
15 do in -- in -- kind of a digital electronic store 11:25:28
16 like -- like Apple's App Store do. It brings
17 together a seller, the -- the developer and a
18 buyer, the customer and brings them together.

19 Now, you said the -- the -- the services
20 that it provides to the developer. Well, what are 11:25:51

21 these services. I mean -- main services, list
22 them. The service that it provides to -- there
23 might be other ones. I'm not going to go into the
24 detail of that. But the main service it provides
25 to the -- to the customer is facilitating the 11:26:09

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1 transaction, being able to pay. 11:26:11

2 Now, these, to me, look complementary.

3 So I'm not completely sure why you say they

4 wouldn't be complementary.

5 Q. Your answer is very clear. 11:26:22

6 Do you agree that to optimize sales the

7 App Store must find a balance in pricing that

8 encourages the greatest number of matches between

9 consumers and developers?

10 A. Well, an app store in general would like 11:26:35

11 to be able to do that to become profitable, to get

12 a -- lot of developers get listed, and get a lot of

13 customers so that they can make transactions.

14 So there is a -- an incentive for an

15 app store owner to bring in both sides of the 11:26:58

16 market.

17 Q. Do you agree that Apple's App Store is a

18 two-sided transaction platform?

19 A. Yes, a transaction platform in the sense

20 that it facilitates transactions between the 11:27:13

21 third-party developer and a customer.

22 Q. Do you agree that because transaction

23 platforms can't make a sale unless both sides of

24 the platform simultaneously agree to use their

25 services, that two-sided transaction platforms 11:27:34

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1 exhibit strong indirect network effects? 11:27:38

2 A. In principle, yes.

3 Q. Do you agree that the Apple App Store
4 exhibits strong indirect network effects?

5 A. Yes. 11:27:54

6 Q. You agree that transaction platforms are
7 best understood as supplying only one product,
8 namely transactions?

9 A. Well, I should say that when we talk
10 about the indirect network effects, I should be -- 11:28:06
11 I should have qualified the previous answer that
12 we're talking about network effects between the
13 developers and the customers, just to be sure
14 because there might be network effects floating
15 around for other reasons. 11:28:20

16 So these are what we're talking about.
17 Let me hear your second question -- your last
18 question again. Sorry.

19 Q. Okay.

20 Do you agree that transaction platforms 11:28:29
21 are best understood as supplying only one product,
22 namely transactions?

23 A. Well, that's the -- the objective is
24 transactions. But the actual thing that happens is
25 distribution. Right. People would not pay unless 11:28:52

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1 Q. (By Mr. Swanson) So -- so are there 11:30:20
2 separate markets for transactions and for
3 distribution services?

4 MR. HARRINGTON: Objection.

5 THE DEPONENT: I didn't say anything like 11:30:27
6 that. I'm sorry, that's kind of misquoting me. I
7 don't think I say anything of that sort. I'm
8 saying --

9 Q. (By Mr. Swanson) Okay.

10 A. -- the function of the store is 11:30:35
11 distribution. And it happens people pay through
12 these transactions.

13 Q. Well, I'm asking you a question. Are you
14 of the opinion, as an economist, that there are
15 separate markets for transactions and for 11:30:51
16 distribution services?

17 MR. HARRINGTON: Same objection.

18 THE DEPONENT: No. Distribution really
19 happens to be paid through the transactions.

20 Q. (By Mr. Swanson) So distribution is an 11:31:10
21 input into providing transactions; is that correct?

22 MR. HARRINGTON: Objection.

23 THE DEPONENT: You might think of it that
24 way as -- as an input, but I would say it's the
25 actual thing. This is what people pay for. 11:31:21

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1 Q. (By Mr. Swanson) Well, what is the 11:31:25
2 product in the relevant market? Is it --

3 A. What -- hold on. What relevant market?
4 I mean, I'm -- I'm not sure I understand.

5 Q. Well, there is a relevant market that 11:31:35
6 you're assuming in this case, correct?

7 A. Well, I am not defining a relevant market
8 in the terms of traditional antitrust. I'm taking
9 the antitrust liability as given, and I'm using the
10 market to calculate damages. 11:31:55

11 Q. Well, you're using the same relevant
12 market to calculate damage that plaintiffs allege
13 and Professor Elhauge opines about, are you not?

14 A. Yes, but I'm -- but I'm saying is that
15 I'm not using the word "relevant market" in the 11:32:13
16 antitrust terms. I'm using the word "market" as
17 economists would use in general.

18 Q. That's perfectly fine, but I'm asking you
19 a question about the relevant market. What do you
20 understand the product in the relevant market is? 11:32:30

21 A. I haven't defined relevant markets.

22 Q. So you have no idea what the product in
23 the relevant market is?

24 MR. HARRINGTON: Objection.

25 THE DEPONENT: Well, I mean, I don't know 11:32:42

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1 if you want to insult me; I mean, you can. But the 11:32:44
2 point is that I -- I have not defined relevant
3 markets. I have used the market, as I understand
4 it, to calculate damages.

5 Q. (By Mr. Swanson) What's the product that 11:32:58
6 you're calculating damages for?

7 A. We are discussing the distribution of
8 apps through the -- exclusively the App Store in
9 the present world compared to the but-for world in
10 which there could be a number of different stores 11:33:18
11 and self-distribution.

12 Q. So the -- is -- is the product for which
13 you're calculating damages transactions?

14 A. The product is distribution. Now, it's
15 paid through transactions. 11:33:38

16 Q. So you draw a distinction in terms of
17 calculating damages between distribution and
18 transactions; is that what you're saying?

19 MR. HARRINGTON: Objection.

20 THE DEPONENT: Well, what -- I -- I said 11:33:55
21 it more than once. I mean, the product is
22 distribution. It's paid through transactions.

23 We're talking about the present world in
24 which distribution is exclusively done through
25 Apple from the Apple Store or the Apple App Store, 11:34:11

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1 and Apple charges a certain price, and we're 11:34:15
2 talking about the but-for world in which we have a
3 number of stores and then we have a different price
4 and we compare them.

5 So when we compare them, of course we 11:34:25
6 compare the -- the prices and -- and the amounts
7 and the -- that correspond to the transactions.

8 But to try to talk about transactions in
9 some strange abstraction without the -- the actual
10 thing that happens, which is distribution, doesn't 11:34:39
11 make sense.

12 Q. (By Mr. Swanson) Are -- are you, as an
13 economist, assuming that the but-for world involves
14 a single-sided market for distribution?

15 A. Well, the way distribution happens is 11:34:59
16 either through a store or through self-distribution
17 by a developer. So if we're talking about a store,
18 then we're talking about a two-sided -- two-sided
19 transaction market.

20 If we're talking about self-distribution, 11:35:28
21 that happens directly from the developer to the
22 consumer. And both of these are avenues in which
23 the product gets distributed in the but-for world.

24 Q. Do you agree that only other two-sided
25 platforms can compete with a two-sided platform for 11:35:48

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1 transactions? 11:35:54

2 MR. HARRINGTON: Objection.

3 THE DEPONENT: In principle, no.

4 Q. (By Mr. Swanson) Do you agree that the
5 relevant market or markets in this case are 11:36:00
6 two-sided transaction markets?

7 A. Well, I'm not sure I understand again the
8 relevant antitrust definition of a market, which I
9 didn't do, and I only calculated damages for the
10 market. 11:36:23

11 Now, this market is a market for
12 distribution. So right now, the way it's done
13 under Apple, there is only one store. It's
14 two-sided, that's fine.

15 If we had the but-for world, then there 11:36:37
16 would be more than one stores, and there would be
17 self-distribution. So both the effects of the
18 extra stores and the self-distribution should be
19 taken into consideration in calculating damages,
20 and that's what I do. 11:36:57

21 Q. Is your calculation of damages
22 independent of the definition of the relevant
23 market?

24 A. My calculation of the relevant damages is
25 based on an antitrust finding of liability, and 11:37:13

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1 beyond that. Shall we take another morning break? 11:38:50

2 THE DEPONENT: Thank you.

3 MR. SWANSON: Okay.

4 MR. HARRINGTON: That's fine here.

5 Ten minutes? 11:38:55

6 MR. SWANSON: Yeah.

7 THE VIDEOGRAPHER: We're now -- we're now

8 going off the record. The time is 11:39.

9 (Recess taken.)

10 THE VIDEOGRAPHER: We're now back on the 11:49:55

11 record. The time is 11:50.

12 Q. (By Mr. Swanson) Professor, how -- how

13 do you measure price in a two-sided transaction

14 market?

15 A. We would look at the total price of -- of 11:50:12

16 the two sides participating in the transaction.

17 Q. And what -- what would the total price be

18 in the context of the App Store?

19 A. Well, it would be what the -- what the

20 consumers pay plus what the developers receive, or 11:50:56

21 minus, whatever you -- however you calculate.

22 Q. Well, how -- could you give me an example

23 of an app that is sold for 9.99, what would be the

24 relevant two-sided transaction price?

25 A. Well, the app is 9.99, so if there is 11:51:24

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1 something that the consumer gets, we can subtract 11:51:29
2 that, and that would be the total price in the
3 market.

4 Now, besides that, there is Apple that
5 has already taken its 30 percent. So that's 11:51:40
6 something to keep in mind.

7 Q. Well, what is the price that you refer to
8 that the consumer is paying?

9 A. The consumer pays 9.99.

10 Q. And so is there a price that the 11:51:58
11 developer pays?

12 A. Well, the -- the developer pays to Apple
13 30 percent.

14 Q. So on a 9.99 transaction that would be
15 \$3? 11:52:20

16 A. Approximately, yes.

17 Q. So would you add 9.99 and \$3 to get the
18 total price of the two-sided transaction?

19 MR. HARRINGTON: Objection. Form.

20 THE DEPONENT: I'm -- I'm not sure I -- I 11:52:33
21 understand that -- that kind of a reasoning.

22 The whole thing is set up so that
23 transactions happen with -- already paid 30 percent
24 to Apple.

25 So the -- the -- the consumer -- the -- 11:52:51

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1 the -- the producer -- the -- the developer pays -- 11:52:55

2 I'm sorry -- collects 9.99. And the customer pays
3 9.99.

4 So in this world, the -- the developer
5 gets paid exactly what the -- the consumer pays, 11:53:17
6 right. And then the developer has to pay
7 30 percent of that to -- to Apple.

8 So in fact, the developer ends up with
9 not 9.99. But 6.99, let's say.

10 Q. (By Mr. Swanson) So which -- 11:53:44

11 A. So that would be the trans- -- the final
12 transaction price.

13 Q. So is 6.99 the price of the product in
14 the relevant market in that example?

15 MR. HARRINGTON: Objection. Form. 11:53:53

16 THE DEPONENT: Well, again, I didn't
17 define the relevant markets. But in -- in that
18 setup, the -- the developer gets paid only 6.99
19 while the -- the customer is -- gets paid 9.99.

20 So we're talking about a but-for world in 11:54:12
21 which even if the developer still collects 9.99,
22 the -- Apple collects less than \$3. So the
23 developer is going to be better off in the but-for
24 world.

25 Q. (By Mr. Swanson) Could you turn to 11:54:35

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1 paragraph 10 on page 5? 11:54:36

2 A. Yes.

3 Q. You state that you "understand that

4 Prof. Elhauge has opined that the relevant market

5 in this case is the market for domestic iOS app and 11:55:02

6 digital in-app purchase (IAP) distribution

7 services, including all the ways the developers can

8 distribute native apps to users of iOS devices in

9 the United States. For the purposes of brevity,

10 throughout this report I will refer to the market 11:55:21

11 as the 'iOS app distribution' market, but I mean

12 this term to include initial purchases,

13 subscriptions, and IAP."

14 So when you use the term "iOS app

15 distribution" in your report, you're referring to 11:55:35

16 Professor Elhauge's relevant market, correct?

17 A. Well, we're referring to initial

18 purchases, subscriptions and IAP, besides --

19 you know, the -- you know, all of these three

20 things. 11:55:52

21 Q. And those three things are in

22 Professor Elhauge's relevant market, correct?

23 A. Yes.

24 Q. And you say "I have read his market

25 definition analysis and find that his conclusions 11:56:00

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1 are sound." 11:56:03

2 So you're making a substantive statement

3 there that you believe Professor Elhauge's

4 conclusions about the relevant market are sound,

5 correct? 11:56:13

6 MR. HARRINGTON: Objection.

7 THE DEPONENT: Correct.

8 Q. (By Mr. Swanson) And you say "In this

9 section, I analyze the characteristics of this

10 relevant market in the but-for world," right? 11:56:20

11 Are you changing that opinion?

12 A. No.

13 Q. So you know what the relevant market is,

14 do you not?

15 A. Well, it was defined by Professor Elhauge 11:56:31

16 and I -- I say that it was sound.

17 Q. And every time you refer to the market in

18 this report, you're referring to that relevant

19 market, are you not?

20 A. Well, in the -- the -- the -- the market 11:56:44

21 for iOS app distribution, right, which includes

22 initial purchase, subscription, IAP. But from my

23 understanding and from my calculation of damages,

24 it includes self-distribution as well.

25 I mean, it's not in the -- I'm -- I'm 11:57:04

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1 sure that it's clear that one cannot exclude
2 self-distribution from the possibility that exists
3 in the but-for world.

11:57:07

6 | A. I don't think so.

11 MR. HARRINGTON: Objection.

19 Q. (By Mr. Swanson) Well, I'm just trying
20 to understand what your opinions are. 11:57:59

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1 MR. HARRINGTON: Objection. 11:58:13

2 THE DEPONENT: No. I'm not -- I'm not
3 saying I'm using it differently. I'm just saying
4 that to be clear, that I have not defined an
5 antitrust market in my report. Whatever is done 11:58:21

6 was done by Elhauge -- that Professor Elhauge. And
7 I take the antitrust liability as given and go on
8 from there to look at this market and seeing how it
9 would be in the but-for world.

10 Q. (By Mr. Swanson) Well, what -- what do 11:58:40
11 you mean then when you say you find his conclusions
12 are sound?

13 A. Meaning, I -- what it says. That I -- I
14 don't have any -- I -- I think that he -- he did a
15 good job, and I don't have any real disagreement 11:58:54
16 with him.

17 Q. Okay. Is the percentage commission for a
18 given App Store transaction the price of that
19 transaction in the relevant market?

20 MR. HARRINGTON: Objection. 11:59:16

21 THE DEPONENT: Can you say it one more
22 time just to be sure.

23 Q. (By Mr. Swanson) Uh-huh.

24 Is the percentage commission for a given
25 transaction in the App Store the price of that 11:59:25

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1 transaction in the relevant market? 11:59:30

2 MR. HARRINGTON: Same objection.

3 THE DEPONENT: Well, let's to be -- to be
4 sure we understand we're on the same page.

5 There is something that the developer 11:59:37

6 collects. Then that fee -- let's say, the
7 30 percent fee that Apple collects -- let's say
8 it's \$3 -- is, in fact, the -- the price that Apple
9 collects for distribution.

10 So that's the -- the crucial number that 12:00:04
11 I think -- and I show -- is going to be different
12 in the but-for world.

13 Q. (By Mr. Swanson) In the but-for world,
14 you talk about percentage commissions, correct?

15 A. Correct. 12:00:19

16 Q. So is it your view that the percentage is
17 the relevant price, or is it the absolute dollar
18 amount in each case that's the relevant price?

19 A. It's the -- it's the commission. It's
20 the commission percentage. So Apple collects 30 12:00:31
21 and for some categories 15. And in the but-for
22 world, these commissions would be different by
23 market participants.

24 Q. Do you agree that Apple's average
25 commission has decreased at least 10 percent since 12:00:52

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1 by year for the App Store, correct? 12:02:34

2 A. That's correct. And I have to say that

3 this is before some extra data came -- some extra

4 data -- data came after the report was published.

5 So we don't go to 2020. 12:02:51

6 Q. But as far as you know, are the entries

7 up through 2018 the same?

8 A. Yes.

9 Q. Okay. And is it your understanding that

10 the number or the average for 2019 may change given 12:03:08

11 the extra data?

12 A. The hour -- the number for 2019. And, of

13 course, there's going to be a number for 2020, yes.

14 Q. Okay. Have you made those calculations?

15 A. My -- my staff is in the process of 12:03:22

16 making the calculations. I -- I haven't seen the

17 final results.

18 Q. Okay. And then we'll just look at 2018.

19 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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14 Q. Is it your opinion that when a two-sided
15 transaction platform sells transactions, that all 12:04:39
16 transactions sold on the platform necessarily
17 belong in the same product market?

18 MR. HARRINGTON: Objection.

19 THE DEPONENT: All right. I need to hear
20 this again, please. 12:04:51

21 Q. (By Mr. Swanson) Is it your opinion that
22 when a transaction platform, a two-sided
23 transaction platform sells transactions, that all
24 transactions sold on the platform necessarily
25 belong in the same product market? 12:05:05

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1 MR. HARRINGTON: Same objection. 12:05:07

2 THE DEPONENT: Well, this seems to be a
3 hypothetical, and I'm not sure I can answer in --
4 in abstraction.

5 Q. (By Mr. Swanson) You can't answer that 12:05:24
6 question?

7 A. Well, I already said it's a hypothetical
8 question about the hypothetical two-sided market,
9 and I'm not sure which one you're talking about.
10 And therefore, I wouldn't be able to say they 12:05:38
11 belong to the same market. They might not.

12 Q. Okay. Well, let's take a specific
13 example. Is it your opinion that when the
14 App Store sells transactions, that all transactions
15 sold on the App Store platform are necessarily in 12:05:56
16 the same product market?

17 MR. HARRINGTON: Objection.

18 THE DEPONENT: Well, first of all, I -- I
19 disagree with the words "sells transactions." I
20 mean, nobody sells transactions. People sell 12:06:11
21 services, people sell goods, people sell something
22 that people are willing to pay. Transaction is
23 what consummates the sale.

24 The -- we're not selling transactions,
25 right? We're selling distribution in the -- in 12:06:24

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1 the -- in the App Store. 12:06:26

2 So if you're telling me the App Store is
3 selling distribution, could it be selling something
4 else? Not as far as I can see.

5 Q. (By Mr. Swanson) Do you know if you and 12:06:41
6 Professor Elhauge have the same opinion on what the
7 relevant product is in the relevant product market?

8 A. The same opinion as?

9 Q. To what the relevant product is in the
10 relevant product market. 12:06:53

11 A. You mean -- I'm not sure what the
12 question is, comparing Elhauge to -- to what?
13 Comparing what Elhauge says to me? To what I just
14 said?

15 Q. Yes. 12:07:10

16 A. Well, I don't know how he phrased it
17 exactly. But the transactions is what consummates
18 the sale. You know, it would be great if you and I
19 can start selling transactions and make money just
20 by selling transactions, but it's not realistic, 12:07:30
21 right?

22 I mean, what's happening behind the
23 scenes is that Apple is distributing products.
24 They're distributing apps, and people are willing
25 to pay for the -- for this distribution through the 12:07:42

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1 transactions. 12:07:44

2 Q. Can you identify any other economist,
3 aside from Professor McFadden, who believes that
4 the products sold by the App Store is not
5 transactions? 12:08:01

6 MR. HARRINGTON: Objection.

7 THE DEPONENT: Well, I -- first of all, I
8 mean, I -- I have to be careful about this. I
9 haven't read what every other economist has said
10 about the Apple Store, and you can understand that 12:08:15
11 I cannot really answer that question, given --
12 given that.

13 But what -- again, coming back to your
14 premise, the store consummates transactions. It
15 doesn't sell transactions. It sells distribution 12:08:31
16 services, and these are consummated in
17 transactions.

18 Q. (By Mr. Swanson) And that is the
19 fundamental basis for your opinions in your report,
20 that understanding of what the market is and how it 12:08:45
21 operates?

22 MR. HARRINGTON: Objection.

23 THE DEPONENT: Well, I mean, it's -- it's
24 one of the crucial understandings of what --
25 what -- what the market is, what -- how 12:08:56

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1 distribution happens, and how distribution can 12:09:01

2 happen in alternative ways, in the but-for world.

3 Q. (By Mr. Swanson) Could you turn to

4 paragraph 26 in your report on page 15.

5 A. Yes. 12:09:29

6 Q. You state that, "The PC app distribution

7 market is not exactly the same as the iOS app

8 distribution market"?

9 A. I'm sorry, are we on 26?

10 Q. Yeah, the very bottom of page 15, that -- 12:09:41

11 that sentence that carries over. Although --

12 A. Hold on -- hold on one second. Yeah.

13 Q. Paragraph 26, please.

14 A. Yeah, right.

15 Yes, I can see that. 12:10:02

16 Q. Okay. What -- what is the PC app

17 distribution market?

18 A. It's distributing apps for the PC

19 Microsoft operating system, Windows.

20 Q. And are you defining on -- a PC app 12:10:15

21 distribution market based on principles of

22 substitution, cross elasticity of demand?

23 MR. HARRINGTON: Objection. Form.

24 THE DEPONENT: Well, I don't think we --

25 I -- I need to do that, but I could if -- if you 12:10:30

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1 wanted. 12:10:33

2 I mean, the point is that we all know
3 what -- what we're talking about. We are talking
4 about apps that run on Windows, and we're talking
5 about the stores that are distributing them and 12:10:48
6 self-distribution.

7 Q. (By Mr. Swanson) Are you limiting the PC
8 app distribution market to distribution on Windows
9 devices?

10 A. Well, I do not recall 100 percent how 12:11:09
11 exactly the numbers we used are, but I believe so.
12 I could be wrong. I better check it and get back
13 to you on this.

14 Q. Do you include, in the PC app
15 distribution market, apps that are distributed by 12:11:35
16 platforms on the Mac?

17 A. No.

18 Q. Are you aware that Steam is available on
19 the Mac?

20 A. Uh-huh, yes. 12:11:49

21 Q. So it is your opinion that Steam on a
22 Windows PC is in a different market than Steam on a
23 Mac?

24 MR. HARRINGTON: Objection.

25 THE DEPONENT: Well, that's a kind of a 12:12:00

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1 broad question, and it has to do with substitution 12:12:04
2 between Macs and PCs.

3 In the past, let's say in the major
4 antitrust case of the government against Microsoft,
5 the government did not include the Mac as a 12:12:24
6 substitute for the PC and went on to win the case
7 based on that understanding.

8 So I do not want to get into the
9 discussion about the substitutability between the
10 Mac and the -- and -- and the PC -- and the PCs. 12:12:52

11 Most people, I think, believe that the
12 Mac setup is pretty far away from the PC setup. So
13 I wouldn't put -- I mean, for example, in -- in an
14 app that runs on PC cannot run on a Mac unless it's
15 rewritten from scratch. So to try to talk about 12:13:17
16 distribution as if Mac and PC are interchangeable
17 would be -- would be foolish.

18 Q. (By Mr. Swanson) So your use of the term
19 "PC app distribution market" excludes any app
20 distribution through identical platforms on the 12:13:38
21 Mac?

22 A. Well, as -- as I -- as I said, there
23 could be platforms that distribute on the Mac, but
24 the idea that the same kind of app is going to run
25 well on both systems, both the PC and a Mac, 12:14:00

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1 doesn't really make sense. It's not really true. 12:14:04

2 So even though the same company might
3 have a store for the Mac and a store for the PC, it
4 doesn't mean that what it's selling is
5 interchangeable between the two operating systems. 12:14:22

6 Q. When the Epic Games store opened up, did
7 it open up on the Mac as well as the Windows
8 platform?

9 A. I don't recall if Epic opened on the Mac.
10 I mean, I haven't examined that. 12:14:44

11 Q. Okay. Have you looked at app
12 distribution on the Mac at all?

13 A. I have not, because I excluded the Mac
14 as -- as a comparable yardstick because of the
15 specific policy of Apple to have the same 12:15:02
16 pricing -- the same fees, the same commission
17 pricing, for iOS and Mac.

18 And, therefore, it made little sense for
19 me, no sense, to use the Mac as a comparator, and,
20 therefore, I didn't go further in examining the 12:15:25
21 distribution of apps in the Mac.

22 Q. Is -- is your PC app distribution market
23 a two-sided market?

24 A. Well, again, some of these stores are
25 going to be two-sided when they are distributing 12:15:44

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1 third-party apps. Like if you see in Table 4, 12:15:50
2 page 22, the -- we have -- I have Steam as a third
3 party, so much sales and so on. Steam's own sales
4 so much and so on.

5 So for Steam, for example, there is a 12:16:08
6 store where third parties participated --
7 participate, and that you can think of as
8 two-sided, but also Steam is distributing, through
9 itself, the own products, the own sales, and that
10 you can think of as one-sided, directly selling to 12:16:35
11 consumers.

12 Q. So you are not defining the PC app
13 distribution market as a two-sided transaction
14 market; is that correct?

15 A. Well, as far as the -- the third parties 12:16:50
16 are -- the third-party distribution's concerned,
17 that's -- that's correct, it's two-sided
18 distribution.

19 But there is also a substitution in the
20 market from own distribution, own product 12:17:04
21 distribution, which cannot be ignored. And it's
22 taken into consideration. It's a substitution that
23 cannot be ignored.

24 Q. Do you include substitution through sales
25 of physical media? 12:17:21

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1 A. I -- I don't think these are -- in any of 12:17:25
2 these in Table 4 were -- were -- were dealing with
3 physical media.

4 Q. Okay. So you exclude that from your PC
5 app distribution market? 12:17:36

6 A. I believe so.

7 Q. Do you know the relative scale of
8 physical distribution during the class period in
9 the PC app world compared to digital distribution?

10 A. I -- I -- I wouldn't be able to say a 12:17:55
11 number off top of my head.

12 Q. Could you turn to page 9, paragraph 17,
13 please.

14 A. Yes.

15 Q. Okay. You state that, "Importantly, this 12:18:24
16 implies that from an economic point of view,
17 opening up competition in app distribution does not
18 require a specific approach to security and
19 certification."

20 Have you made an assumption or reached a 12:18:40
21 conclusion about whether the iOS app environment
22 in the but-for world would be more secure, less
23 secure, or equally secure than the actual world?

24 MR. HARRINGTON: Objection.

25 A. Well, I have not made a -- a finding 12:19:04

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1 on -- on -- on that. But let me explain that I 12:19:07
2 allow for two possibilities, depending on what the
3 Court says.

4 The Court might say, Well, we won in the
5 but-for world. Even though there is going to be 12:19:27
6 competition and various stores and
7 self-distribution and all that, we want Apple to
8 maintain the right to control which apps are
9 allowed to operate on the operating system.

10 So that's one possibility. And I allow 12:19:44
11 for that possibility.

12 But it could be that the Court would say,
13 Well, you know, we think that the world should be
14 much more open, and, therefore, let the various
15 stores create their own certification and security 12:19:59
16 and so on for whatever they're selling.

17 So I see this as a possibility for -- if
18 that -- if the finder of facts goes in that
19 direction, I would see that there's a possibility
20 for Apple -- Apple Store and alternative stores, to 12:20:23
21 compete in this dimension, the dimension of
22 security and certification.

23 So my but-for world allows for both of
24 these possibilities.

25 Q. Your calculation of damages in the 12:20:45

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1 but-for world does not change at all depending on 12:20:48
2 which of these two alternatives the finder of fact
3 accepts, correct?

4 A. That's correct.

5 Q. If Apple retains the right to control 12:21:01
6 what apps are allowed, according to a finding by
7 the finder of fact, what fees do you assume it
8 would apply for that -- for that service to other
9 app stores?

10 MR. HARRINGTON: Objection. Form. 12:21:22

11 THE DEPONENT: Well, the -- the service
12 is not provided to other app stores. It's provided
13 to the -- to the developer. And right now, Apple
14 charges \$99 per year or 299 for the Enterprise
15 product program, so I assume that this would remain 12:21:44
16 the same.

17 Q. (By Mr. Swanson) Are you assuming that
18 alternative iOS app stores in the but-for world
19 will not need a license from Apple to use Apple's
20 intellectual property? 12:21:59

21 A. I am not completely sure what you mean by
22 that. What kind of intellectual property are we
23 talking about?

24 Q. Well, can -- is it -- is it your
25 assumption that Steam or Epic or any other entity 12:22:14

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```
1      could run a store and sell iOS apps without                               12:22:21
2      having a license from Apple for using Apple's
3      computer code?
```

4 A. Well, there has to be some connection
5 with the Apple operating system. The same way 12:22:41
6 as -- in the PC, there has to be an -- an
7 application product interface, an API, which would
8 allow the, let's say, Epic store to run and provide
9 products for -- for -- for the Microsoft PC.

```
10         So that kind of connection will be 12:23:09
11     required.  Otherwise the -- the -- the stores will
12     not be able to work.
```

13 And, of course, additionally, the -- the
14 distribution, the direct distribution, should also
15 be allowed. 12:23:28

16 So if you want to call this an imposition
17 on -- on the intellectual property of Apple, you
18 can call it, but in some way, this is kind of
19 normal type of business for interconnecting
20 products. It's not something unique. And it's not 12:23:47
21 something abnormal. So I would say this would be
22 required, but I don't see it as -- as a severe
23 imposition on the intellectual property of Apple.

24 Q. Well, it's a normal thing for a company
25 to charge some fee for the use of its intellectual 12:24:04

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1 property; is that not -- 12:24:10

2 A. Well -- well, if you really think that
3 Apple will end up saying, I will only give you the
4 API if you give me \$10, I mean, I -- I don't know.

5 I mean, that sounds to me unlikely. 12:24:22

6 I mean, either the finder of fact is
7 going to say, Look, you have to open the markets
8 and you have to provide the APIs to -- to the
9 stores or -- or not.

10 I mean, the idea that somehow Apple has 12:24:37
11 to be specifically compensating for opening an API,
12 I guess it's conceivable, but I find it unlikely.

13 Q. Well, your -- your calculations do not
14 include any payment whatsoever for the use of
15 Apple's APIs by any rival App Store, correct? 12:24:57

16 A. My -- I do not -- let me put it in a
17 positive way. I did not set up any additional fees
18 to Apple in the but-for world besides the -- the
19 commission fee, which I calculate.

20 Q. So you understand that in the but-for 12:25:27
21 world, it is possible that some developers will
22 only sell their apps through nonApple means,
23 otherwise --

24 MR. HARRINGTON: Objection.

25 Q. (By Mr. Swanson) -- otherwise than 12:25:44

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1 through the App Store? Do you agree with that? 12:25:46

2 MR. HARRINGTON: Sorry to interrupt.

3 Objection.

4 THE DEPONENT: Sorry, I -- you cut off

5 for a minute so I -- I didn't hear the whole thing. 12:25:52

6 Q. (By Mr. Swanson) Sure. I'll start over.

7 Would you agree that your but-for world

8 includes scenarios where developers choose not to

9 sell their apps, their iOS apps, through the

10 Apple App Store but instead sell their iOS apps 12:26:07

11 through rival app stores?

12 A. Yes, of course that can happen, or it can

13 happen also they can sell them through multiple

14 stores, including the Apple Store, but it can

15 happen that they -- some might not. 12:26:24

16 Q. And is it your opinion in the scenario

17 when the Court has Apple reviewing the apps that

18 are going to be sold only in nonApple app stores

19 in -- in that scenario which I identified, that

20 Apple would not charge anything beyond the \$99 that 12:26:45

21 it charges developers currently for making apps

22 available in the Apple App Store?

23 MR. HARRINGTON: Objection to form.

24 THE DEPONENT: Yes, broadly I would say,

25 yes. I mean, the \$99 is the present standard fee, 12:27:06

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1 and I would expect it to stay the same. 12:27:12

2 Q. (By Mr. Swanson) If -- if your
3 assumption is incorrect and, for example, Apple was
4 to charge \$299 to developers who were having Apple
5 review their apps but were choosing to sell those 12:27:31
6 apps outside the Apple App Store, would that change
7 any of your opinions?

8 A. Well, I think it -- it depends on what
9 but-for world we are -- we're talking about. If
10 the finder of fact says, You -- you, third-party 12:27:47
11 store, any developer who sells through you has to
12 pay whatever this number is that you just mentioned
13 to Apple for certification, then I'll have to take
14 that into consideration and alter the amount of
15 damages in my report. 12:28:07

16 But on the other hand, if the finder of
17 fact says, Look, if you want, you can pay Apple 299
18 and -- and get certified, but if you don't want to
19 pay 299, go through a third party which maybe has
20 Symantec or McAfee or who knows who, who is 12:28:31
21 certifying the security of the app, and the Court
22 might say, Well, that's fine, let competition
23 happen between Apple and the rest of the stores
24 on -- on certification.

25 So that can also happen, and then -- then 12:28:49

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1 the issue doesn't arise so -- doesn't arise. 12:28:52

2 Q. Could you please turn to page 11. I
3 wanted to ask you a question about figure 1.

4 A. Yes.

5 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23 Q. Now, on page 10, Table 1, you represent

24 that the operating margin for the App Store in 2019

25 was 76.6 percent, correct? 12:30:11

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1 A. 2015, you said? 12:30:15

2 Q. 2019.

3 A. 76.6, yes.

4 Q. Uh-huh. In your opinion, would Apple

5 have had higher overall company operating margin if 12:30:25

6 it had sold the iPad business?

7 A. I -- I have not examined that.

8 Q. Well, can you do the math?

9 A. No. I mean, I -- you are asking me

10 something that I haven't examined. I'm not going 12:30:41

11 to start offering opinions under oath here on

12 something of that sort.

13 Q. Okay. So you -- that's not an opinion as

14 an economist that you can -- that you can provide?

15 A. Look, as an economist, in this particular 12:30:53

16 proceeding, there's some things I have worked on

17 and these is what I'm talking about.

18 Telling me, Well, what if a line of

19 business of Apple were changed, well, I haven't

20 examined that. I mean, you know, it's not a fair 12:31:11

21 question for an economist that has been -- has been

22 asked to offer opinion on -- on a very specific

23 type of issue on the App Store.

24 Q. Well, if an economist knows that the

25 entire company's operating margin is [REDACTED] percent, 12:31:26

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1 and that one piece of that company's operating 12:31:31
2 margin is [REDACTED] percent. If you were to exclude the
3 piece that has a [REDACTED] percent operating margin, what
4 do you think would happen to the overall operating
5 margin? 12:31:48

6 MR. HARRINGTON: Objection.

7 THE DEPONENT: If -- if -- if your
8 question really means suppose that this thing
9 wasn't there and that we somehow -- I -- I don't
10 know. It's very hard to do this kind of 12:32:05
11 hypothetical.

12 And I -- I wouldn't want to be in the
13 position of Mr. Cook. I mean, that's the guy who
14 is making these decisions about what to include in
15 his -- in the bundle of products that Apple offers. 12:32:21

16 I think it's a bit too -- how can I
17 say -- superficial for us to come out and say,
18 Well, what if they threw away this division, what
19 would happen to the margin? I mean, it's not
20 something that I feel comfortable discussing. 12:32:35

21 Q. (By Mr. Swanson) Would you feel
22 comfortable discussing whether or not you have the
23 opinion that the App Store would have a
24 76.6 percent margin if it was operated by a third
25 party? 12:32:52

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1 MR. HARRINGTON: Objection. 12:32:53

2 THE DEPONENT: You mean if the present
3 conditions of exclusivity remain and it was
4 operated by third party?

5 Q. (By Mr. Swanson) Everything is the same 12:33:06
6 but it's operated by a third party.

7 A. Well, that's a kind of an interesting
8 question that I haven't really examined, but it's
9 an interesting question: Does -- does Apple do
10 things internally better than outsourcing them? 12:33:22
11 It's an interesting question. But I haven't
12 examined it, and, therefore, I'm not going to offer
13 an opinion.

14 Q. Do you have an understanding as to what
15 the operating margin was for the iPhone, iPad and 12:33:37
16 App Store taken together?

17 A. Well, I mean, we have to look at -- more
18 carefully at the -- at the numbers. I -- I
19 haven't -- I don't have it on top of my head.

20 Q. Okay. Well, do you believe it's higher 12:33:53
21 than 25 percent?

22 A. I'm sorry, say again the categories?

23 Q. If you were to combine the iPhone, iPad
24 and App Store businesses together, do you know what
25 the operating margin would be for that combined 12:34:07

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1 business? 12:34:10

2 A. No, I wouldn't be able to do that, and I
3 don't think I'm so good in doing math in -- under
4 oath in front of the camera, so I wouldn't -- I
5 would venture not to -- not -- not to say yes or no 12:34:21
6 to that.

7 Q. Okay. Well, do you have an understanding
8 as to whether that combined operating margin would
9 be closer to the [REDACTED] percent overall company
10 margin, or would it be closer to the 76.6 percent 12:34:34
11 margin that you report in Table 1?

12 A. Well, I -- I already said that I -- I
13 don't think it's a good idea for us here. But just
14 looking at the margins without volumes and so on,
15 to try to create an actual calculation of -- of 12:34:52
16 that sort, I mean, it's not -- it's speculative.

17 Q. Well, if you assumed that the margin of
18 those three businesses combined was less than
19 30 percent, would that affect any of your opinions
20 in your report? 12:35:15

21 MR. HARRINGTON: Objection.

22 THE DEPONENT: Not as far as I can see.

23 MR. HARRINGTON: Mr. Swanson, I don't
24 know what your thoughts were for lunch or whether
25 you're at a stopping point but -- 12:35:32

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1 MR. SWANSON: No, it's a good -- I was 12:35:34
2 just going to raise that, so I'm -- whatever -- my
3 rule is the witness and the court reporter can
4 decide.

5 MR. HARRINGTON: I like that. 12:35:42

6 MR. SWANSON: Yeah.

7 THE DEPONENT: Well, it's 12:35. We can
8 give it 40 minutes. Would -- you guys are okay
9 with that?

10 MR. HARRINGTON: Okay for the 12:35:55
11 court reporter and videographer?

12 THE COURT REPORTER: That's fine.

13 THE VIDEOGRAPHER: Fine with me.

14 THE DEPONENT: 40 minutes, so that would
15 make it -- go ahead, you -- you say that area 12:36:06
16 what -- how -- how -- when we restart.

17 MR. HARRINGTON: It's a math question,
18 isn't it?

19 MR. SWANSON: Yes.

20 THE DEPONENT: Yeah. 12:36:10

21 THE VIDEOGRAPHER: Are we ready go off
22 the record?

23 MR. SWANSON: Yes.

24 THE VIDEOGRAPHER: We are now going off
25 the record. The time is 12:36. 12:36:18

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1 (Recess taken.) 12:36:20

2 THE VIDEOGRAPHER: We are now back on the

3 record. The time is 1:17.

4 Q. (By Mr. Swanson) Professor, it was

5 brought to my attention that I omitted to mark as 01:17:16

6 an exhibit one more errata sheet relating to your

7 report, so let me make sure to have a full record

8 here.

9 (Exhibit 32 was marked for identification

10 by the court reporter and is attached hereto.) 01:17:28

11 Q. (By Mr. Swanson) So we put this document

12 into the marked exhibits as Exhibit 32. It is a

13 document entitled "Errata Regarding Expert Class

14 Certification Report of Professor Nicholas

15 Economides." 01:17:45

16 Take a look at that and confirm that that

17 was the -- the initial errata sheet that you

18 submitted.

19 A. Yes, that's correct.

20 Q. Okay. 01:17:56

21 A. Thank you.

22 Q. Thanks.

23 So back to Exhibit 29. Could you please

24 turn to paragraph 30.

25 A. Yes. 01:18:25

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1 Q. You state here that two potential 01:18:25
2 yardsticks are available that allow you to estimate
3 what the prevailing commission rate for the iOS
4 app distribution market would be in the but-for
5 world. 01:18:37

6 Are you relying on any yardsticks in
7 support of your opinions other than the two
8 referenced here?

9 A. No. These are the ones that I'm relying
10 on. 01:18:50

11 Q. Okay. How do you determine whether a
12 yardstick is reliable?

13 A. Well, you -- for the first yardstick, we
14 look for a distribution market that has similar
15 features, and we find that the Windows PC app 01:19:06
16 distribution market has similar features to the
17 iOS app distribution market.

18 Now, the second one, the -- the profit
19 yardstick is from a different set of firms that are
20 also running marketplaces, and we -- I mean, I can 01:19:31
21 go in more detail there about the -- the
22 requirements that I have imposed on that further
23 on.

24 Q. Is it important, when determining whether
25 a yardstick is reliable, to make sure that it 01:19:51

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1 may advertise a typical commission rate, they may 01:21:22
2 also provide special deals to certain customers,
3 and there is generally no way to know without their
4 sales data or more -- or other detailed discovery
5 what their effective commission rate is." 01:21:34

6	Do you see that?
---	------------------

7	A. Yes.
---	---------

8 Q. In your opinion, if there are special
9 deals for certain customers or if the commission
10 rate varies, does that -- from the advertised rate, 01:21:48
11 does that disqualify a platform from being a
12 yardstick?

13 MR. HARRINGTON: Objection. Form.

14 THE DEPONENT: Well, not necessarily. I
15 have two different approaches. One, the yardstick 01:22:02
16 for the PC app distribution market and rejecting
17 the -- the macOS, the video game platforms, the
18 digital -- digital content platforms, and so on,
19 because of the reasons I -- I state.

20 Then I look for the other yardstick, 01:22:30
21 which is for what -- what I call the rival profit
22 yardstick, where I am not looking at the fees but
23 I'm looking at profits in general, and then -- we
24 can talk about it in a bit more detail if you want.

25	Q. (By Mr. Swanson) Are your yardsticks	01:22:59
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1 taken from two-sided transaction markets? 01:23:01

2 A. They are taken from marketplaces, I mean,
3 to the extent that that's -- that's typically a
4 two-sided transaction market.

5 Q. Back in paragraph 30 on page 17, you 01:23:20
6 indicate that -- again this -- I think what we were
7 looking at that earlier, that there are two
8 potential yardsticks available that allow you to
9 estimate what the prevailing commission rate would
10 be in the but-for world. 01:23:39

11 What do you mean by "prevailing"?

12 A. "Prevailing"?

13 Q. Yes.

14 A. Means what the commission rate would have
15 been in the but-for world. 01:23:48

16 Q. Okay. Is -- is that -- is that different
17 from the average commission rate?

18 A. I wouldn't say it's different.

19 Q. Okay. So -- so when you use the term
20 "prevailing," you mean average? 01:24:03

21 A. Well, in the context that you were --
22 were saying here, we're trying to find the average
23 commission rate in the but-for world, and you can
24 add the word "prevailing" too. I mean, I don't see
25 anything wrong with that. 01:24:18

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1 Q. Well, we talked before about a mix of 01:24:20
2 rates. Is the prevailing rate the modal rate?
3 A. I didn't hear the last word. At what
4 rate?
5 Q. Is the prevail -- the prevailing rate 01:24:34
6 the -- the -- the mode among the rates?
7 A. The way I calculate it, and I invite you
8 to see more carefully about how exactly I -- I
9 calculated it, is the -- for the PC stores, it's
10 the weighted average of the commission of the 01:24:54
11 stores I mentioned, Steam, Epic, Blizzard, Origin,
12 WeGame and Microsoft.
13 Q. Is this a weighted average over the class
14 period?
15 A. Yes. Well, I mean, I -- I believe so, 01:25:12
16 but -- although the numbers that are presented are
17 for 2019.
18 Q. Okay. But -- but your view is --
19 A. I -- sorry, go ahead.
20 Q. Your view is that that would be 01:25:28
21 representative of the weighted average commission
22 charged by those PC stores for the entire class
23 period?
24 A. I think for the earlier part of the
25 period, they might have been -- I -- I've seen data 01:25:41

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1 that says they were charging more. So the actual 01:25:44
2 2019 number is defendant friendly. It's kind of a
3 bit lower than earlier years.

4 Q. In -- well, do you know how much lower it
5 is? Have you calculated them? 01:26:04

6 A. I probably have, but I don't have it in
7 front of me. I can -- can I pick up a -- another
8 document which is -- what is it? Some backup
9 document.

10 Q. Sure. 01:26:18

11 A. Yeah. Hold on. Let me see.

12 Yeah, I have here a document that was
13 part of the backup, and it's the -- Valve effective
14 rate, and it shows that in 2015, it was
15 29.98 percent, and then it kept decreasing and 01:26:45
16 reached, in 2019, 25.63. And then in 2020 and '21,
17 it was even smaller.

18 So this is in the backup. I'm sorry, I
19 don't have an easy way to show it to you. But it's
20 in -- it's under -- it's named under the Valve for 01:27:05
21 backup. So this is just one indication of the
22 effective commission rate being lower in 2019
23 compared to earlier years.

24 Q. And the backup you're referring to is a
25 spreadsheet with -- with the Steam -- Steam 01:27:22

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1 commission rate? 01:27:27

2 A. Exactly, Steam Valve. I'm not sure if

3 the -- it's named Steam or Valve. It might be

4 called Valve.

5 Q. I think -- I think Valve is the parent 01:27:34

6 owner company; does that sound right?

7 A. That's right, yeah.

8 Q. Okay. In -- in paragraph 30, you state

9 that if you were asked to construct a yardstick in

10 a case brought by a single developer, you would 01:27:49

11 conduct the same market-wide analysis to determine

12 an appropriate yardstick for that developer.

13 Were -- were you asked to conduct an

14 analysis of the appropriate yardstick for

15 Donald Cameron? 01:28:05

16 A. I have constructed the analysis for

17 Donald Cameron, but it's not in the report.

18 Q. And is there a reason why it's not in the

19 report?

20 A. It's not in the report because I did it 01:28:19

21 after -- after the deadline of the report. But

22 I -- I thought it might be a relevant issue, so I

23 have -- I have done it, yes.

24 Q. And -- and what's your opinion as to the

25 relevant yardstick for Mr. Cameron? 01:28:33

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A. The relevant yardstick works fine. It allocates a specific amount for every year of the class period to Donald Cameron.

6 A. Well, I mean, it has three numbers --
7 (Brief interruption.)
8 (Discussion off the stenographic record.)

16 Q. (By Mr. Swanson) I see. So you
17 calculated Mr. Cameron's damages; is that what
18 you're saying?

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1 Q. You're using the same yardstick 01:30:12
2 commissions, but you're just applying it to his
3 particular sales; is that correct?

4 A. Exactly, yeah. Exactly.

5 Q. And did you analyze how Mr. Cameron would 01:30:23
6 distribute his app in the but-for world?

7 A. Well, I -- I gave him the average
8 overcharge so, you know -- and I'm not -- I
9 wouldn't be able to say exactly how he's going to
10 distribute it in the but-for world. But I -- I 01:30:54
11 assume he would use the various marketplaces that
12 would be in the but-for world, including possibly
13 Apple.

14 Q. Are you familiar with Mr. Cameron's app?

15 A. Not really, no. 01:31:10

16 Q. Did you examine whether Mr. Cameron has
17 competitors for his app?

18 A. No, I haven't examined.

19 Q. That wasn't important to you?

20 MR. HARRINGTON: Objection. 01:31:27

21 THE DEPONENT: Well, it's not crucial. I
22 mean, you know, the -- there -- there are lots
23 of -- of these developers. Most of them have
24 competitors.

25 The fact they have competitors is not the 01:31:33

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1 main question here. The main question is, what are 01:31:36
2 they overcharged by -- by Apple and how much more
3 they were overcharged.

4 Q. (By Mr. Swanson) Did -- did you also
5 conduct an analysis of damages for Pure Sweat 01:31:49
6 Basketball?

7 A. I don't believe so.

8 Q. Okay. Have you examined the history of
9 Pure Sweat's app or apps?

10 A. Oh, I'm sorry. 01:32:08
11 Did you say Pure Sweat?

12 Q. Yes.

13 A. Yeah. I -- I have done that, yes. I
14 have seen these numbers as well, yeah.

15 Q. Okay. Are you aware that there was a 01:32:15
16 period of time when Pure Sweat's app was entirely
17 free with no in-app purchase?

18 A. No.

19 Q. Okay. Well, if you assume that before
20 2019, Pure Sweat's app was entirely free, there was 01:32:31
21 no in-app purchase and no commission paid by
22 Pure Sweat, did you calculate any damages before
23 2019?

24 A. I don't think so. But I don't quite
25 recall because I don't have it in front of me. 01:32:50

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1 Q. Okay. Are you aware that Pure Sweat, 01:32:52
2 before 2019, sold a subscription to its app through
3 its website?

4 A. No, I'm not. I don't remember that.

5 Q. Okay. Are you aware that in 2019 01:33:06
6 Pure Sweat changed the way it collected money for
7 its subscription by discontinuing the Web -- Web
8 subscription and adopting in-app purchase in its
9 iOS app?

10 A. I -- I do not recall. 01:33:24

11 Q. Okay. What would you expect happened to
12 the price of Pure Sweat's subscription when it
13 changed from charging for the subscription on --
14 only on its website to charging for its
15 subscription only through its iOS app? 01:33:40

16 Do you think the price went up or down,
17 or stayed the same?

18 A. I -- I would have to examine it in -- in
19 some detail. I haven't done that.

20 Q. Can you rule out any particular change? 01:33:52
21 Can you say there is -- there's no way
22 that the price would have gone down?

23 A. Well, I would have to look at it more
24 carefully before I -- I say something.

25 Q. Okay. Is that true for any given app? 01:34:05

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1 MR. HARRINGTON: Objection to form. 01:34:10

2 THE DEPONENT: Well, every given app

3 didn't -- didn't do the change that you're

4 proposing, that you went to -- from subscription

5 to -- to IAP. So I don't see the relevance of the 01:34:21

6 question.

7 Q. (By Mr. Swanson) Well, you -- you

8 studied apps that went from IAP to Web subscription

9 only, correct?

10 A. No, I have not studied specific apps for 01:34:31

11 that.

12 Q. Have you looked at Netflix?

13 A. I have looked at Netflix, but not in

14 extreme detail.

15 Q. Do you understand that Netflix went from 01:34:43

16 IAP to Web subscription only?

17 A. Yes.

18 Q. Okay. Do you know what happened to its

19 Web subscription price after it did that?

20 A. I have not examined that. 01:34:58

21 Q. Okay. In -- well, can you move to

22 paragraph 33 of your report -- I'm sorry.

23 Did I say 33? 31.

24 A. Yes.

25 Q. So here you say that "One potential 01:35:20

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1 yardstick for the commission rate that would have 01:35:24
2 prevailed is the commission rate charged in other,
3 similar markets that are not contaminated by"
4 anti- -- "anticompetitive conduct."

5 What do you mean, "contaminated by 01:35:38
6 anticompetitive conduct"?

7 A. Well, there is a extensive discussion
8 in the -- in the -- in the next page about the
9 Android app distribution market, which you might
10 think would be the right comparator, the right 01:35:57
11 yardstick.

12 But then we look at the Android app
13 distribution market and we see that there is
14 anticompetitive conduct there by -- by Google. And
15 this is discussed in -- in detail in paragraph 33. 01:36:12

16 Q. Uh-huh.

17 Is exclusive dealing conduct
18 anticompetitive?

19 A. It could be.

20 Q. Is below-cost pricing anticompetitive? 01:36:26

21 A. It could be as well.

22 Q. Have you analyzed whether the Epic Games
23 store was engaged in anticompetitive conduct?

24 A. That was not my assignment.

25 Q. Okay. So you've assumed that the 01:36:39

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1 Epic Games store is not tainting your yardstick 01:36:42
2 with anticompetitive conduct?

3 A. I have made the calculations for the --
4 the cost of Epic. So even though they are not
5 necessarily covering all their costs right now, 01:37:04
6 they're definitely covering variable costs. So
7 that I have seen. And there is another part of the
8 report that we can go to that, if you want.

9 Q. I'd like to ask you now about
10 paragraph 33. I think you referenced that a moment 01:37:21
11 ago.

12 You state here that "Android app
13 distribution appears to be tainted by
14 anticompetitive conduct that renders it unfit as a
15 yardstick for competitive rates in the but-for 01:37:32
16 world."

17 Are you offering an opinion as to whether
18 Android app distribution is tainted by
19 anticompetitive conduct, or just appears to be?

20 A. Well, from -- the way I -- I see it, it 01:37:56
21 looks like it's tainted by anticompetitive
22 conduct -- con- -- sorry -- anticompetitive
23 actions.

24 And there is tying of the global mobile
25 services with -- within the -- a group of services, 01:38:19

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1 including the Play Store service -- are imposed on 01:38:24
2 competitors on the take it or leave -- I'm sorry --
3 on OEMs, on a take-it-or-leave-it setup.

4 There is exclusivity. And in some cases,
5 Google has paid for exclusivity that they -- that 01:38:47
6 -- what exclusivity do I mean? I mean that the
7 Play Store would be the only one installed on an
8 Android device and that would be displayed in a
9 specific way prominently and -- and so on.

10 There are issues with Chrome, which is 01:39:09
11 also part of the -- of the bundle, in terms of the
12 way it's installed.

13 And additionally, the -- the Android OS
14 makes it difficult for people to install --
15 consumers to install directly apps and gives 01:39:32
16 various warnings against it.

17 So these are very serious problems. They
18 are outlined in detail in Professor Elhauge's
19 report, and I believe it's -- it's correct that the
20 creator attained it -- a yardstick. So it 01:39:56
21 shouldn't be using the Android app distribution
22 market as a yardstick for competitive rates in the
23 but-for world for iOS.

24 Q. And -- and when you're talking about this
25 anticompetitive conduct, are you indicating that 01:40:16

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1 the entity that engaged in the conduct is Google? 01:40:19

2 A. Yes.

3 Q. Okay. Are you offering the independent

4 opinion that Google has, in fact, engaged in

5 anticompetitive conduct in an Android app 01:40:33

6 distribution market, or are -- are you relying on

7 Professor Elhauge for that?

8 A. Well, Professor Elhauge has -- has

9 explained it in some detail. But at the same time,

10 to me, it looks like Google has significantly 01:40:54

11 restrained the -- the distribution, the -- the --

12 the alternative stores that -- that exist in -- in

13 Android and has imposed itself as -- as -- how can

14 I say -- as a primary dominant distribution store

15 in the Android market. 01:41:27

16 Q. Is Google a member of the alleged class

17 here?

18 A. I -- I -- I do not recall.

19 Q. Have you looked at the list of the very

20 largest class members? 01:41:48

21 A. Well, there's 60,000 of them. But -- no,

22 I have -- I don't recall whether Google is -- is --

23 is one of them.

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Q. Okay. And your testimony is that your yardstick applies equally to Donald Cameron and to those seven developers?

01:42:19

A. Yes, because the -- the average fees in the but-for world would -- are calculated classwide, marketwide.

Q. So does that mean that large developers who might get bigger discounts in the but-for world are going to earn less in damages than Donald Cameron, who would not get a discounted rate in the but-for world?

01:42:41

MR. HARRINGTON: Objection. Form.

THE DEPONENT: No. I mean, I haven't said anything about discounts that you -- your -- your premise is -- is -- you know, it's not what I have said.

01:42:56

Q. (By Mr. Swanson) Well, can you answer the question, whatever my premise is?

01:43:07

A. Well, okay. So let's hear it again.

Q. Okay. So you said that -- your testimony is that the yardstick applies equally to Donald Cameron into the [REDACTED] developers who had more a [REDACTED] in sales because the average --

01:43:26

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1 because the average is calculated classwide, 01:43:35
2 marketwide. And I'm probing what you mean by the
3 average.

4 Are you saying that the yardstick is the
5 same because large developers and small developers 01:43:48
6 will have their commissions averaged out in your
7 but-for world?

8 MR. HARRINGTON: Objection. Form.

9 THE DEPONENT: Well, what I'm saying is
10 that I have calculated a yardstick that allows me 01:44:00
11 to find the average commission in the but-for world
12 and this would apply to everyone, to small
13 developers and to large developers.

14 And that's what I have. And that's what
15 I have done. And that's -- that's the way it is. 01:44:25

16 Now, you are presuming that somehow large
17 developers are going to get some discounts. I
18 don't know what that is. But in any case, that's
19 not my model. That's not my testimony.

20 Q. (By Mr. Swanson) Is -- isn't it true 01:44:47
21 that the Samsung Galaxy Store charges a default
22 30 percent commission rate?

23 A. That, I think, is correct as a default,
24 although they -- it gives other discounts and so
25 on. 01:45:06

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1 Q. Do you have an understanding or opinion 01:45:08
2 as to the average commission rate on the Samsung
3 Galaxy Store?

4 A. I do not recall. But trying to find a
5 particular store as a comparator -- as a comparator 01:45:22
6 is not useful. We need to find a market as a
7 comparator, like the Android market. And once we
8 have found that in the Android market Google has
9 tainted the Android market, it really doesn't
10 matter what's going on with Samsung or somebody 01:45:43
11 else. I cannot bring a single company as a
12 comparator yardstick.

13 Q. Are -- are you offering the -- the
14 opinion that the commissions charged by the Samsung
15 Galaxy Store are supracompetitive? 01:45:59

16 A. I'm not offering any opinion on Samsung.

17 Q. So you're not offering any opinion that
18 Samsung has engaged in any anticompetitive conduct
19 in the Android app distribution market; is that
20 correct? 01:46:19

21 A. I -- I haven't examined Samsung's
22 behavior in detail.

23 Q. In your opinion, does Samsung possess
24 most of the infrastructure and knowledge necessary
25 to operate a similar store for iOS? 01:46:30

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1 A. Well, I have a Samsung phone, and I've 01:47:53
2 never seen the -- the -- the Samsung store
3 displayed from the -- you know, on my phone.

5	A. Yes.	01:48:04
---	---------	----------

7 A. But that's prominently displayed.

10	Google?	01:48:18
----	---------	----------

15 Q. There's an allegation in the complaint 01:48:35
16 that Google attempted that, but there's no
17 allegation that Samsung agreed to it, is there?

20 Q. Are you offering any opinion that the 01:48:52
21 Samsung Galaxy Store does not compete with
22 Google Play in the United States?

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1	that -- that it competes with -- with the	01:49:13
2	Google Play Store.	

3 But it's kind of irrelevant to my
4 testimony, to my model, because the Android app
5 distribution market is already tainted by Google's 01:49:27
6 actions, and, therefore, it's out. And, therefore,
7 I cannot use it, no matter what happens with
8 Samsung.

9 Q. One of the factors you pointed to

10 regarding taint apply to Samsung, do they? 01:49:37

11 A. I didn't understand that.

12 MR. HARRINGTON: Objection. Form.

13 THE DEPONENT: Can you please say it
14 again.

15 Q. (By Mr. Swanson) None of the factors 01:49:45
16 that you point to with respect to taint apply to
17 Samsung and its Galaxy Store, do they?

18 MR. HARRINGTON: Same objection.

19 THE DEPONENT: Well, I don't know what
20 you mean by "apply." When -- when Google, for 01:49:56
21 example, taints this market, and it has high fees
22 because of that, then that creates a different
23 pricing environment for everybody, including
24 Samsung, and that's why we shouldn't really be
25 using that market as a comparator. 01:50:19

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1 Q. (By Mr. Swanson) So does Google's 01:50:22

2 conduct benefit Samsung?

3 A. I haven't examined that in detail, but it
4 definitely affects it.

5 Q. How -- how does it definitely affect 01:50:34
6 Samsung commission rates?

7 MR. HARRINGTON: Objection. Form.

8 THE DEPONENT: Well, now we're getting
9 here to be a bit speculative. I haven't examined
10 in detail Samsung rates. So I'll say it in 01:50:45

11 hypothetically, so that if you have one firm which
12 is dominant, like -- and it has a high fee, it is
13 possible that other firms which are not dominant
14 are going to have relatively higher fees.

15 But, again, in my opinion, this is 01:51:16
16 speculation about something on which I have not
17 examined in detail. So it's better to leave it
18 aside. It doesn't have a bearing on my damages
19 calculation.

20 Q. (By Mr. Swanson) Moving to paragraph 34, 01:51:35
21 you state there that, "There is a thriving
22 ecosystem of rival Android app stores in China"?

23 A. Uh-huh, yes.

24 Q. What study have you made of the Android
25 ecosystem in China? 01:51:54

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1 for some stores, it's 50 percent, but he always has 01:53:36
2 another example in which he says for others, it's
3 zero. So it seems to be varying a lot.

4 Q. Well, his only instance of zero for game
5 developers is through self-distribution, correct? 01:53:49

6 A. I don't believe that was a
7 self-distribution example. Or at least I have seen
8 myself -- maybe it wasn't in Evans' report --
9 evidence that there are some -- some app stores
10 that have zero commission. 01:54:07

11 Q. In -- in -- in China?

12 A. In China, yes.

13 Q. On Android?

14 A. Yes.

15 Q. Isn't it the case that the prevailing 01:54:16
16 commission rate in China for Android stores for
17 nongame developers is zero?

18 A. Look, I -- I think that the -- the -- the
19 issue here is that the -- the information that we
20 get from China is unreliable. The market is too 01:54:34
21 "fragmentor" -- fragmented, and there is extremely
22 limited public information.

23 So these three things are -- and the
24 recent interference by the Chinese government --
25 these four things are enough to say we cannot use 01:54:51

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1 as a comparator. 01:54:54

2 Q. How does the fragmented nature of a
3 market prevent you from creating a reliable
4 yardstick?

5 A. Well, fragmented by itself would not kill 01:55:02
6 it. But you need to be able to get information
7 from each one of these fragmented parties to be
8 able to -- to construct the right measures, the
9 right indices.

10 Q. Are the factors that you've noted in 01:55:20
11 paragraph 34 of your report ones that would prevent
12 you from creating a reliable yardstick based on the
13 Chinese Windows app distribution market?

14 A. I have not examined the Chinese Windows
15 app distribution market. 01:55:39

16 Q. Do you know if it's fragmented?

17 A. As I said, I have not examined it.

18 Q. Not having examined it, is it fair to say
19 that you would not, therefore, include it in your
20 yardsticks? 01:55:55

21 A. I believe my -- my yardstick is the -- in
22 the PCs is for the U.S. market.

23 Q. That's your intent, correct?

24 A. I believe so, yeah.

25 Q. Okay. In paragraph 36 of your report, 01:56:10

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1 you state that "there may be some degree of
2 anticompetitive conduct somewhere in the Windows PC
3 app distribution market."

4 What are you referring to there?

A. I think there was -- there is a footnote
there, footnote 65, that says Valve has been sued
by Humble Bundle alleging an illegal tie -- an
illegal tie within Steam. So that's the potential
anticompetitive conduct that I have seen some
evidence of.

01:56:34

01:56:59

11 Q. You've -- you've seen evidence of this?

12 A. Well, the -- whatever is discussed in --
13 in the footnote 65.

14 Q. So have you -- are you relying on a press
15 report based on a complaint? 01:57:16

16 A. Well, I'm mentioning it. But as -- as
17 you know, I am using the PC app distribution
18 market, so I do not think that this potential
19 anticompetitive conduct by Steam is crucial.

20 Q. You state, at the end of paragraph 36. 01:57:37

21 That is there no doubt -- and you're referring to

22 the Windows PC app distribution market -- "There's

23 no doubt that the market is more competitive than

24 iOS app distribution."

25	Do you see that?	01:57:56
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1 A. Yes. 01:57:56

2 Q. Was that true in 2015?

3 A. Well, the distribution market for iOS
4 for app -- the app distribution has been -- we have
5 had the regime for a number of years, including 01:58:15
6 2015, that only Apple could distribute that --
7 the -- the apps.

8 So if you could -- if you compare a
9 market like the Windows PC app distribution when
10 there are a number of competitors with different 01:58:33
11 market shares compared to Apple in which -- in the
12 iOS app distribution, it has 100 percent market
13 share, that's the difference. The market looks
14 more competitive for -- in Windows PCs.

15 Q. Was the Windows -- 01:58:54

16 A. App distribution, I should say, sorry.
17 In the Windows PCs app distribution I should say.
18 Thank you.

19 Q. Was the Windows PC app distribution
20 market ever less competitive, in your view, than 01:59:04
21 the App Store at any time?

22 A. Well, I have only examined the times from
23 2015 to today, the class period. So in that time,
24 no.

25 Q. Do -- do you have any opinion as to 01:59:24

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1 whether Microsoft has ever had substantial market 01:59:29
2 power in the Windows PC app distribution market?
3 MR. HARRINGTON: Objection.
4 THE DEPONENT: I have not seen
5 substantial market power by Microsoft during at 01:59:45
6 least the period that I have looked at in 2015 to
7 '19.
8 Q. (By Mr. Swanson) When were app stores
9 offering third-party distribution first available
10 on Windows? 02:00:03
11 A. I -- I don't remember the exact date.
12 Q. That was before the App Store existed,
13 right?
14 A. I don't remember, as I said.
15 Q. Well, are you aware that Steam existed 02:00:17
16 before --
17 A. Yes, Steam definitely existed before,
18 yes.
19 Q. And did Microsoft have a third-party
20 distribution platform before the App Store existed? 02:00:29
21 A. I do not quite recall. It's very
22 possible.
23 Q. When were self-distribution platforms
24 first available on Windows?
25 A. Well, from the beginning of Windows, you 02:00:45

1 could self-distribute. I mean, because, you know, 02:00:47
2 Windows has been around for over 30 years, yes. I
3 mean, yes, they were around for a very long time.

4 Q. Do -- do you have an opinion as to
5 whether the Mac App Store has substantial market 02:01:08
6 power in the market in which it operates?

7 A. I have not examined that question, but
8 because Apple insists on the same fees for iOS
9 app distribution and Mac app distribution, I have
10 excluded it from the comparator, because the -- the 02:01:44
11 market doesn't operate independently from the iOS
12 market.

13 Q. Does Microsoft, in your yardstick, charge
14 any commissions that are the same as what it
15 charges on the Xbox? 02:02:02

16 A. I do not think they are the same, but
17 it's possible I'm wrong on this.

18 Q. If they are, would you need to exclude
19 Microsoft's store for Windows from your yardstick?

20	A. No.	02:02:27
----	--------	----------

21 Q. Do you have any opinion as to whether Mac
22 owners face switching costs?

23 MR. HARRINGTON: Objection.

24 THE DEPONENT: Mac owners face switching
25 costs if they switch to -- to what? 02:02:41

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1 Q. (By Mr. Swanson) To a nonMac operating 02:02:45
2 system.

3 A. I think that's true for most operating
4 systems and a specific way that things happen in
5 a -- in a Mac versus a PC. So switching from a Mac 02:02:57
6 to PC or from a PC to a Mac, there is a cost.
7 There is a -- a cost that creates a friction there.
8 There's a switching cost.

9 Q. Do you have an opinion as to whether the
10 switching costs that Mac owners face are greater or 02:03:11
11 less than the switching cost faced by iOS device
12 owners?

13 MR. HARRINGTON: Objection.

14 THE DEPONENT: You mean by iOS device
15 owners towards Android? 02:03:26

16 Q. (By Mr. Swanson) Correct.

17 A. I do not have an opinion on that. I have
18 not examined this in any detail.

19 Q. Do you have an understanding or opinion
20 of what percentage of macOS app distribution occurs 02:03:38
21 through the Mac App Store?

22 A. I have not examined that.

23 Q. Have you studied the rates paid by
24 developers for macOS app distribution?

25 A. Again, because I excluded the -- the Mac 02:04:00

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1 for the reasons I stated before, because it has the 02:04:04
2 same fees as -- as the iOS and they're not
3 independently set, I didn't go into deeper
4 examination of the Mac store market -- the Mac
5 store app market. 02:04:18

6 Q. Is it your opinion that the 30 percent
7 commission charged in the Mac App Store is
8 supracompetitive?

9 A. Look, I mean, this 30 percent comes from
10 iOS. So definitely in the iOS app distribution 02:04:42
11 we have a strong opinion by Professor Elhauge that
12 this is supracompetitive. And I -- I take this
13 anticompetitive behavior as given.

14 Now, I have not made a detailed
15 examination of the Mac store market. And I 02:05:01
16 explained more than once why not. Because the
17 30 percent is tainted, because it comes from the
18 iOS app distribution.

19 So I didn't go any further to discuss or
20 think or establish whether the pricing in -- by 02:05:19
21 the -- by the Mac store is, in fact,
22 anticompetitive.

23 Q. Well, does your opinion that the Mac app
24 distribution business is tainted necessarily mean
25 that the 30 percent Mac app commission is 02:05:44

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1 supracompetitive? 02:05:48

2 A. I have already answered that question.

3 Q. Well, I -- I don't think you have. And
4 I'm asking the question now.

5 Unless there's an instruction not to 02:05:58
6 answer, you need to answer it.

7 A. Okay. Let's hear the question one more
8 time, please.

9 Q. Does your opinion that the Mac app
10 distribution business is tainted necessarily mean 02:06:09
11 that the 30 percent Mac app commission is
12 supracompetitive?

13 A. The short answer is no because I have not
14 examined this. And I do not have an opinion
15 whether the 30 percent Mac fee is supracompetitive. 02:06:27

16 At the same time, it -- this fee seems to
17 have imposed on the Mac from the fee of the iOS
18 app distribution. So because of that, I cannot use
19 the iMac as a comparator. And I have not gone
20 further in -- in an analysis of the "i" market for 02:06:55
21 app distribution.

22 Q. Thank you.

23 Turning to page 20 again, the middle
24 bullet on that page about "Video Game Consoles."

25 Do you see that? 02:07:15

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1	A. Yes.	02:07:15
---	---------	----------

2 Q. Are you including Nintendo's Switch and
3 its online store, the eShop, in your opinions?

4 A. I believe so.

5 Q. Okay. Are you aware that Nintendo 02:07:30
6 charges a 30 percent commission in its online
7 store?

8 A. I'm aware that all these video game
9 companies are charging significant fees in their
10 online stores. But the reason -- the real reason 02:07:54
11 why they -- they do that, which is -- which is
12 completely different from the reason that Apple
13 uses -- I'm sorry -- chooses to use a 30 percent
14 commission on the iOS app distribution.

15 And the reason is that these companies -- 02:08:11

16 Microsoft, Xbox, Sony and Nintendo -- they give

17 their hardware at cost and most of the time below

18 cost. And this is well established in the

19 literature. And I'm not the only one saying this.

20 I have a footnote with a whole bunch of people 02:08:32

21 saying this.

22 I believe even Professor Schmalensee --
23 this footnote, by the way, is footnote 44. I also
24 believe even Professor Schmalensee in a book or an
25 article -- Professor Schmalensee was an expert for 02:08:48

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1 Apple in the Epic v. Apple case. I also think that 02:08:51
2 he thinks the same thing. That, in fact, the
3 hardware is sold below cost.

4 So we have a world on the video game
5 console manufacturers and software in which the 02:09:07
6 hardware is provided below cost or [REDACTED]

7 [REDACTED] And most of the
8 money, or all the money, is made from the games,
9 from royalties on the games from the video cost
10 manufacturers. 02:09:35

11 This should really seriously be
12 contrasted. And this is done in table 2 -- with
13 Apple. [REDACTED]

14 [REDACTED]

15 [REDACTED] [REDACTED] [REDACTED] [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 But the difference -- the crucial
19 difference is that for the game manufacturers, they
20 sell the hardware below cost or slightly above 02:10:10
21 cost, [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED] [REDACTED]

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■ [REDACTED] ■

■ [REDACTED]

■ [REDACTED]

4 Q. And you base that on opinion -- you base

5 that opinion on the need to look together on a 02:10:45

6 combined basis, the returns from hardware and the

7 returns from selling apps?

8 A. Well, first of all, I base my opinion on

9 the hardware operating margin on a whole bunch of

10 articles, including the -- the article of 02:11:04

11 Professor Schmalensee. That this is, in fact,

12 the -- the norm. Okay. So they are selling the

13 hardware below cost or slightly above cost. And

14 then they have a positive amount of money coming in

15 from selling apps from royalties on -- on -- on 02:11:26

16 apps.

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED] ■

■ [REDACTED] [REDACTED]

■ [REDACTED]

23 Q. It's a fact, isn't it, that Nintendo has

24 never lost money on the Switch?

25 A. [REDACTED] ■

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1

2

3

4

Q. Does the iPad have a margin about the same amount?

5

A. I have not examined the -- the iPad.

02:12:23

6

7

Q. Well, it's -- it's in your report. We looked at -- we looked at your figure, didn't we?

8

9

A. Well, this was the -- the figure from -- from Apple's operating -- I mean, this is an

10

internal operating margin for Apple.

02:12:41

11

12

But if you want to go back to figure 1, yes, it looks like something like that.

13

14

Q. So is Apple selling the iPad below cost in order to encourage people to purchase apps through their iPads?

15

02:12:54

16

MR. HARRINGTON: Objection. Form.

17

THE DEPONENT: Well, I'll say it again.

18

I have not examined the market for iPads. I should be careful what I say about it.

19

20

21

22

23

24

25

Q. (By Mr. Swanson) Are you aware that

02:13:26

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1 Sony's chief financial officer just reported that 02:13:29
2 the PlayStation 5 console is not selling at a loss?
3 A. Well, that's an interesting piece of
4 information. I -- I have seen a number of articles
5 that say exactly the opposite. So we can -- we can 02:13:46
6 talk about it.
7 I mean, what he says versus others. But
8 I definitely have not seen a deep discussion on
9 this. And I -- as far as I know, the numbers I
10 present here for 2019 show a significant loss for 02:14:03
11 Sony, Sony selling the console significantly below
12 cost.
13 Q. Well, are you aware that Sony stopped
14 selling the PlayStation 4 at a loss after
15 six months? 02:14:22
16 A. I'm not sure which PlayStation you're
17 talking about right now.
18 Q. PlayStation 4.
19 A. I am not sure. I wouldn't be able to say
20 that. But these numbers come from publicly 02:14:32
21 available information, and I believe they are
22 correct, the numbers in table 2.
23 Q. Well, would you rely on a statement by
24 Sony's chief financial officer?
25 MR. HARRINGTON: Objection. 02:14:51

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1 THE DEPONENT: Well, look -- I mean, I 02:14:52
2 don't know what to make of a statement that you
3 just told. Me I haven't even seen the statement.
4 You're just saying that he said that. Okay. Fine.
5 Maybe he said it. 02:15:03

6 But what does it mean, when I have the
7 actual margin here as minus 34 percent for Sony in
8 2019. So it means that Sony changed its policy.
9 It's possible. I don't know. But -- I mean, I --
10 I -- I don't see why I should adjust anything in my 02:15:19
11 report based on that.

12 Q. (By Mr. Swanson) Where -- how -- how do
13 you have the actual margin from Sony?

14 A. I believe this came from some document --
15 where is it here? 02:15:39

16 It's a called Economides margin
17 calculations 2019. May I look at hard copy of
18 that?

19 Q. Of course.

20 A. Yeah. One second. 02:15:48
21 Somehow I do not seem to -- to have it.
22 Could I look in my computer for it?

23 Q. Go -- go right ahead.

24 A. Thank you.

25 Okay. I opened a document called 02:16:48

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1 "Economides Margin Calculations," which is in -- in 02:16:50
2 the backup that we have provided. And it shows the
3 sources for table 2 as being

4 MICROSOFT_EPIC_00000093 and Apple -- a couple of
5 documents by the App Store and -- and so on. 02:17:25

6 So this is the documentation where I got
7 the numbers from.

8 Q. Okay. Do you have any documentation from
9 Sony?

10 A. I -- I think that all the documentation I 02:17:39
11 have are -- is from Microsoft and Apple, not from
12 Sony.

13 Q. And does the documentation from Microsoft
14 indicate anything about Microsoft's returns on Xbox
15 sales? 02:17:50

16 A. I -- I do not recall exactly what the --
17 I mean, we can go and look at this document, the
18 one ending in 93, and look at exactly what it says.

19 Q. Okay.

20 A. I don't recall from memory. 02:18:07

21 Q. Okay. Well, we'll do that.

22 But before then, one or two last
23 questions then we'll take a break. I think we've
24 been going for an hour.

25 You are aware that Sony charges a 02:18:19

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1 30 percent commission rate in the online Sony 02:18:21

2 PlayStation store?

3 A. Yes.

4 Q. And you're aware that that has been true

5 for the entire class period? 02:18:28

6 A. Uh-huh, yes.

7 Q. And you're aware that Microsoft charges a

8 30 percent commission rate in the -- the store that

9 it operates on the Xbox?

10 A. I -- I believe that Microsoft has decided 02:18:42

11 from -- from August 1st to go to 12 percent.

12 Q. On the Xbox?

13 A. I'm not completely sure if it is just

14 for -- for everything or just the -- or it excluded

15 Xbox, but I -- I've seen some announcement that 02:18:58

16 says that from August 1st, they were going to

17 12 percent.

18 Q. Well, is it important to you to know

19 whether or not Microsoft is reducing the commission

20 in the Xbox store? 02:19:11

21 A. The -- not really. The -- the -- we

22 already have discussed why the -- the consoles in

23 the associated games have different economics than

24 the Apple iOS App Store. And, again, for one

25 last time, I mean, the economics are completely 02:19:37

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1 different. 02:19:39

2 The -- the companies -- Microsoft, Sony,

3 Nintendo sell the consoles below cost or at the

4 slight positive margin. And they make all their

5 money from the -- by collecting commissions from -- 02:19:52

6 from -- from the software, so from the software

7 distribution.

■

■

■

■

12 Q. Okay. And focusing on the period from

13 June 4th, 2015, until August 1st of this year,

14 you're aware that during that period, Microsoft

15 charged the 30 percent commission in its Xbox 02:20:35

16 store, correct?

17 A. Yes, with the caveats of comparability

18 that I said in the previous answer.

19 Q. And you admit that it's 30 percent,

20 correct? 02:20:51

21 A. I -- I -- I do not disagree on that,

22 again with the caveats that we said before in the

23 other answers.

24 MR. SWANSON: Okay. Let's -- shall we

25 take a break now? 02:21:02

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1 THE DEPONENT: Sure. Ten minutes? 02:21:03

2 MR. SWANSON: Ten minutes.

3 THE DEPONENT: Thank you.

4 MR. SWANSON: Okay.

5 THE VIDEOGRAPHER: We're now going off 02:21:08

6 the record. The time is 2:21.

7 (Recess taken.)

8 THE VIDEOGRAPHER: We're now back on the

9 record. The time is 2:34.

10 THE DEPONENT: I -- I should say, before 02:35:01

11 you ask another question, that I -- I misspoke in

12 the last question about Microsoft, about it

13 charging 30 percent through today.

14 In paragraph 28 on page 16, I note in my

15 report that, "Microsoft distributes third-party 02:35:19

16 non-game PC apps for 15 percent since March 2019."

17 Okay. So just want to make sure that the record

18 reflects that, thank you.

19 Q. (By Mr. Swanson) And that's through its

20 Microsoft Store for Windows, not its Microsoft 02:35:36

21 Store for Xbox, correct?

22 A. Yes.

23 Q. Professor, are you offering any opinion

24 with respect to injury or damages of class members

25 with regard to sales of apps through the App Store 02:35:54

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1 that were accomplished on an iPad? 02:36:00

2 A. Well, I'm trying to remember exactly what
3 the class is. So in paragraph 7, the allegation is
4 that, "Apple charged supracompetitive prices to
5 developers for iOS devices, including iPhones,
6 iPads and iPhone touches," so it's included in the
7 class.

8 Q. And --

9 A. And in my opinions.

10 Q. Uh-huh. And do you know what percentage 02:36:39
11 of the total revenues of the developer class on the
12 App Store was attributable to purchases via iPads?

13 A. I do not recall.

14 Q. Do you recall if it was greater than
15 25 percent? 02:37:03

16 A. I do not recall.

17 Q. Are you offering any opinions on the
18 iPad in your report?

19 A. Well, I'm offering opinions for the whole
20 market, which includes the iPads and the iPhone 02:37:18
21 touches as well as the iPhones.

22 Q. In offering those opinions, are you
23 taking into account the very low profitability of
24 the iPad to Apple?

25 MR. HARRINGTON: Objection. Form. 02:37:34

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1 THE DEPONENT: Well, I'm looking at 02:37:36
2 the -- the whole market. That includes the iOS
3 devices, all iOS devices, including iPhones, iPads
4 and iPod touches, so I'm including everybody --
5 everyone together. 02:37:53

6 Q. (By Mr. Swanson) In the but-for world,
7 are you making any assumptions about whether or not
8 the iPad would be priced the same or priced
9 higher than it was in the actual world?

10 A. Is this question about the iPad's 02:38:22
11 hardware?

12 Q. Yes. The iPad.

13 A. I am not making any claim on the pricing
14 of the iPad hardware.

15 Q. Okay. Well, are you assuming that there 02:38:37
16 would be no change in the price of the iPad in the
17 but-for world?

18 A. The way I have calculated the -- the
19 damages is by focusing on the app market, and this
20 app market includes not only iPhones but also iPads 02:38:56
21 and iPod touches, so I have not made any
22 calculation of changes of the hardware as a result
23 of the damages that I calculated in the but-for
24 world.

25 So my assumption is that these prices for 02:39:24

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1 the hardware would remain the same. 02:39:29

2 Q. Would your damages calculations be any
3 different if you assumed that in the but-for world,
4 the iPad would be priced higher than it is in the
5 actual world? 02:39:48

6 A. I have no reason to believe that that's
7 going to happen. So I have not made the
8 calculation that is based on the iPad being sold at
9 a higher price in the but-for world.

10 Q. My question was, would it affect your 02:40:05
11 damage calculations if you were to assume that?

12 A. Well, I don't see why I would assume it.
13 You know, there -- there is no evidence that Apple
14 is going to start selling the hardware at the
15 higher price because we are in the but-for world 02:40:24
16 and it has to have lower fees on app distribution.

17 I mean, after all, there was a period
18 before the Apple Store existed, and Apple was a
19 profitable company even then.

20 Q. Well, are you aware when the iPad was 02:40:50
21 introduced?

22 A. I am not sure at this point.

23 Q. The iPad was introduced after the
24 App Store, was it not?

25 A. I -- I'm willing to believe you on this. 02:40:59

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1 Q. Okay. Let me ask you to turn to page -- 02:41:02

2 paragraph 38 of your report.

3 A. Yes. 38?

4 Q. 38. Uh-huh. You indicate --

5 A. Page -- page 21? 02:41:30

6 Q. Starts on page 21, yup, and that's where
7 I'm starting.

8 A. All right.

9 Q. You state, toward the bottom on page 21,
10 that, "In the but-for world where developers and 02:41:40

11 users would have the choice to transact outside the

12 App Store, then competition from self-distribution

13 would either discipline the pricing of third-party

14 stores in the market, or developers would

15 self-distribute in the but-for world." 02:41:56

16 Do you see that?

17 A. Uh-huh, I do.

18 Q. Is that true of the actual world in your
19 PC Windows app distribution market?

20 A. Well, to some extent it must be true in 02:42:10
21 the app -- in the Windows PC distribution market.

22 Q. So --

23 A. That's why we see effective commission
24 rates which are not too high in table 4.

25 Q. Okay. And therefore, it's your opinion 02:42:30

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1 that "competition from self-distribution
2 disciplines the pricing of third-party stores in
3 the market for the PC -- the Windows PC market"? 02:42:34

4 A. It's a substitute distribution, which --
5 which people have an option to use, developers have 02:42:49
6 an option to use. So, you know, if I'm a customer,
7 I could get the product from the developer
8 directly, or I can get it from a third party. If
9 the third party has a really high fee, then that
10 might be an issue. 02:43:13

11 Q. Well, why would a third party have a very
12 high fee if competition from self-distribution
13 disciplines the pricing of third-party stores in
14 the Windows PC app distribution market?

15 A. Well, exactly, it wouldn't. So if I -- 02:43:28
16 if I am, let's say, Epic, I could -- I could
17 distribute through my own store and have an
18 effective commission rate of [REDACTED], and then
19 you can call that self-distribution.

20	I could also go and develop a way to	02:43:58
21	distribute through Microsoft, and then I would have	
22	a very ineffective rate of commission of	
23	28 percent.	

24 So I'll make my calculation as Epic and

25 say. Look, I mean, I'm going to try to sell as 02:44:12

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1 much as possible through my own store. 02:44:15

2 And the fact that my own store, I can
3 sell it with [REDACTED] commission, creates a
4 general discipline in the alternative stores.

5 Q. Well, when did competition from 02:44:37
6 self-distribution first discipline the pricing of
7 third-party stores in the Windows PC app
8 distribution market?

9 A. Well, self-distribution existed, I think
10 very early in -- for Windows, even before there 02:44:52
11 were -- there were stores in -- in the Windows PC.

12 Q. If competition --

13 A. And --

14 Q. Sorry.

15 A. And that kind of existence of -- of -- of 02:45:05
16 self-distribution has generally disciplined the
17 effective commission rates in the -- of the various
18 third-party stores.

19 Q. If competition from self-distribution
20 disciplines the pricing of third-party stores for 02:45:27
21 Windows app distribution, why do you need to
22 include the cost of self-distribution in your
23 yardstick? Aren't you double counting?

24 MR. HARRINGTON: Objection to form.

25 THE DEPONENT: Well, the -- no, I'm not 02:45:42

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1 double counting. I'm not sure how you thought of 02:45:47
2 that. I -- there is no double counting at all.

3 If you are thinking of self distribution,
4 we think of the commission rate being essentially
5 the -- the cost of -- of distribution by the -- by 02:46:10
6 the company. And that's what I used, the cost of
7 distribution by a company.

8 Q. (By Mr. Swanson) In paragraph 38, on
9 page 22, you state that "For the stores
10 self-distributing apps, I have estimated costs 02:46:37
11 based on the cost incurred by the Epic Games
12 Store."

13 Do you see that?

14 A. Correct.

15 Q. And so is that the case, that you're 02:46:46
16 using the Epic Games store estimate for the five
17 online PC app stores in your yardstick analysis
18 that self-distribute apps?

19 A. That's correct. That's what I use.

20 Q. And you estimate that Epic's costs are 02:47:05
21 equal to [REDACTED] per year plus [REDACTED]
[REDACTED], correct?

23 A. Yes.

24 Q. And that estimate is based on Epic's
25 projection, not its actual cost in revenues; isn't 02:47:18

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1 that the case? 02:47:23

2 A. Well, it's -- let's go to -- if you don't
3 -- if you don't mind, I will look at the backup of
4 a paper called "Rate Yardstick" as part of my
5 backup. And it -- it shows specifically how I 02:47:36
6 arrived at -- at the [REDACTED] -- [REDACTED]
7 plus [REDACTED] variable costs. And it's based on
8 Epic data.

9 I mean, it's -- it's based on current
10 Epic data. Okay. So I know that Epic -- Epic 02:48:04
11 shows two different numbers, the 2019 number and
12 five-year projection, [REDACTED]. But my number, the
13 [REDACTED], is based on the 2019
14 number, not on the projections.

15 Q. That was less than a year after the 02:48:32
16 Epic Games store entered, correct?

17 A. Yes.

18 Q. So you are basing it on ten -- ten months
19 of data?

20 A. Well, I'm basing it on whatever Epic 02:48:46
21 reported for 2019. And the further projections
22 don't disagree with this 2019 numbers that I'm
23 using now, you know.

24 Q. Well, what further projections are you
25 talking about? 02:49:10

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1 A. I'm -- I'm talking about -- okay. 02:49:11

2 So you don't have this backup "Rate

3 Yardstick" in front of you. But that paper, in the

4 backup, has six columns. 2019, which is the

5 actual. Plus, 2020, 2021, 2022, 2023 and 2024, 02:49:23

6 which are projections. And they have the various

7 costs that they think are reasonable.

8 They have gross revenue. They have the

9 marketing costs, payment processing costs, hosting

10 costs, people costs, and so on and so on. 02:49:44

11 So the calculation that I'm using is

12 based on the 2019 numbers. So essentially this

13 gives you [REDACTED] as fixed costs, and then you

14 have a variable cost of [REDACTED].

15 And that's what I'm using. So I'm not 02:50:08

16 using the projections, but at the same time the

17 projections they did are very consistent with their

18 2019 numbers and the numbers that I got out of the

19 2019 numbers.

20 Q. Did -- did you compare the projections to 02:50:25

21 the actuals for 2020?

22 A. I -- I do not have the actuals for 2020.

23 Q. Are you sure of that?

24 A. I'm sure of that.

25 Q. You sure that was not produced by Epic? 02:50:37

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1 A. I -- I do not believe I have them. 02:50:41

2 Q. Well, are you sure it was not produced by
3 Epic?

4 A. You're -- you're asking a question that I
5 don't have an answer to. I -- I cannot tell you if 02:50:49
6 it was produced by Epic or not. I -- if it was
7 produced, it's extremely likely that the lawyers
8 sent it to me. I don't have it. So I deduced that
9 probably it wasn't produced.

10 Q. Okay. Pretty clear. 02:51:04

11 The [REDACTED], does -- does that
12 include marketing expenses?

13 A. It includes people, plus some
14 outsourcing. I don't -- I don't recall if it
15 includes marketing or not. 02:51:37

16 Q. Does the [REDACTED] cover any marketing?

17 A. Oh, yes. I -- I should correct myself.

18 The [REDACTED] corrects marketing, hosting
19 and a small percentage of the human beings -- human
20 beings increases. 02:51:54

21 Q. And --

22 A. So I -- I -- correcting myself, the fixed
23 is outsourcing in people. The variable is
24 marketing, hosting people and so on.

25 Q. Okay. Does the [REDACTED] include the 02:52:07

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1 cost of free apps on the Epic Games store? 02:52:09

2 MR. HARRINGTON: Objection to form.

3 THE DEPONENT: I am not sure I completely

4 know what you're talking about.

5 You're talking about Epic giving away 02:52:22

6 some free apps. If they did that for some

7 percentage of their -- of their -- of their apps,

8 I'm not sure if they would report such fixed costs.

9 Q. (By Mr. Swanson) Would -- would that be

10 included in the [REDACTED]? 02:52:45

11 A. I think that it's more -- it's much more

12 likely to be included in marketing and be part of

13 the [REDACTED].

14 Q. Does the [REDACTED] include the cost of

15 payments for exclusive arrangements with 02:53:02

16 developers?

17 A. I -- I -- I do not know that. I do not

18 know that at the level which I got the numbers,

19 they go -- they get into that -- such detail.

20 Q. Well, you're aware that Epic had very 02:53:19

21 substantial payments to developers by way of

22 minimum guarantees, are you not?

23 A. I'm aware of that, yup.

24 Q. And you're excluding all that from your

25 assessment of what it cost to run the store? 02:53:37

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1 A. I -- I -- I believe that most likely it's 02:53:39
2 included in variables cost.

3 Q. And --

4 A. I'm -- I'm not excluding it in any way.

5	Q. Okay.	02:53:50
---	----------	----------

6 A. My numbers add up to -- to their numbers.

7 Q. In- -- insofar as you used the Epic cost
8 structure for other developers, what would be the
9 effective commission rate on an annual basis for a
10 self-distributor with annual revenues of 02:54:09
11 \$100 million?

12 A. I -- I have not made that calculation.

13 I'm not...

14 Q. Well, would it be [REDACTED]

15 [REDACTED] of 100 million? 02:54:22

16 MR. HARRINGTON: Objection to form.

17 THE DEPONENT: You are talking about a
18 hypothetical in which somebody is selling
19 100 million?

20	Q. (By Mr. Swanson) Yes.	02:54:37
----	--------------------------	----------

21 A. Yeah. And I -- I have not done that
22 calculation. But I assume you can apply that
23 number. I mean, after all, the -- the gross
24 revenue of -- of Epic is significantly higher than
25 that.

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1 Q. Yeah. 02:54:57
2 I'm just asking what you think this
3 100 -- or [REDACTED] applies to.
4 Does it -- it apply to a developer with a
5 \$100 million in annual iOS app revenues? 02:55:08
6 A. I think it could apply, yes.
7 Q. And -- and if it did, that developer to
8 self-distribute through its own store would
9 require -- incur a payment of [REDACTED]
10 [REDACTED] of 100 million, which would be a total of 02:55:30
11 [REDACTED] per year, correct?
12 A. Yes.
13 Q. So that would be a [REDACTED] effective
14 commission rate for self-distribution?
15 A. Maybe. But I think that right now we're 02:55:48
16 getting a bit off the beaten path. I mean, we were
17 doing this calculations on top of our head and I --
18 I think that's a dangerous way to go.
19 I -- I mean, you know, I -- I have
20 created this specific report with all this specific 02:56:03
21 numbers and trying to kind of make it up right now
22 as we go. I'm -- I'm concerned about it. I'm not
23 sure if we're doing the calculations right.
24 Q. Well, we -- we let the judge decide what
25 the beaten path is. If you can just answer the 02:56:21

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1 question. 02:56:23

2 Do you feel that your [REDACTED]
3 [REDACTED] model doesn't apply to developers with
4 \$100 million in annual iOS app revenues?

5 A. I -- I don't see them not applying to 02:56:36
6 that. Yeah, it could be apply, yes.

7 Q. Okay. Do Windows PC app developers
8 self-distribute free apps?

9 A. I do not know for sure. Some of them
10 might. 02:56:59

11 Q. Okay. Do you know what the cost of
12 self-distributing free apps is? Is it any
13 different from self-distributing paid apps?

14 A. Well, I think that's kind of -- a more
15 general question. You know, generally speaking, at 02:57:15
16 the level that we are talking about, the cost, in
17 general, should be -- should be similar.

18 But whether the free apps have other
19 features that I don't know, I -- I wouldn't be able
20 to say. I mean, my focus in this report and the 02:57:38
21 damages created were only for paid apps. So I did
22 not go deep into free apps.

23 Q. If you could turn to page 22 of your
24 report. This is the page with table 4 on it.

25 You state at the top of that page "To 02:58:02

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1 calculate a yardstick, I and my staff have 02:58:06
2 identified three different online PC app stores
3 distributing 3rd party apps, and five different
4 online PC app stores self-distributing apps."

5 These are the eight stores that are 02:58:22
6 listed in -- in table 4?

7 A. Yeah, some of them. I mean, although
8 they appear as eight stores, some of them are --
9 are the same store, yeah.

10 Q. But -- but different functions of the 02:58:32
11 same store, correct?

12 A. Correct.

13 Q. The stores that you selected were not a
14 random sample, correct?

15 MR. HARRINGTON: Objection to form. 02:58:47

16 THE DEPONENT: They were the ones that I
17 thought best fitted this -- this problem.

18 Q. (By Mr. Swanson) Aren't -- aren't these
19 all examples provided by Microsoft in one of its
20 documents that you rely on? 02:58:59

21 A. I -- I -- I really don't recall if
22 Microsoft has the stores there. I mean, this
23 was -- even if what you're saying is true, I --
24 I -- this issue about Microsoft has little to do
25 with me. I don't -- I don't do things because 02:59:19

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1 Microsoft -- Microsoft suggests things. 02:59:22

2 Q. Okay. Well -- well, let's turn to a
3 document that you cited as something you relied on
4 for purposes of table 4, and we'll mark it as
5 Exhibit 33. 02:59:36

6 (Exhibit 33 was marked for identification
7 by the court reporter and is attached hereto.)

8 MR. SWANSON: It's a Microsoft document
9 produced in discovery. The title page is "CY2019
10 Game Industry Profit," and then below that it says 02:59:51
11 "Gaming Business Planning & Strategy Team,
12 May 2020."

13 Q. (By Mr. Swanson) Once -- once that's up
14 on the screen, take a look at it.

15 A. Yes. What page do you want to go to? 03:00:11

16 Q. Well, let's just start with the front
17 page. I want to ask you a question or two about
18 it, generally.

19 This is a document that you rely on in
20 constructing your table 4, correct? 03:00:19

21 A. Let me make sure.

22 I don't believe so. I -- in -- in my
23 backup, I -- I -- I rely upon -- I'm sorry.

24 Table 4. Hold on.

25 I'm not sure I mentioned this -- this 03:00:50

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1 thing -- this particular document. I mentioned 03:01:24
2 another document by Microsoft, the one that ends
3 with 348. I don't see --

4 Q. You mentioned a document that ends with
5 93? 03:01:35

6 A. Yes. That's an Epic document.

7 Q. Yes.

8 A. Okay.

9 Q. And I -- I -- well, that's a document
10 produced by Microsoft in the Epic case. 03:01:45

11 A. All right. Okay. We're on the same page
12 now.

13 Q. Yeah. So this -- this -- I will
14 represent to you, this document, Exhibit 33, is the
15 document with Bates numbers ending in 93. 03:01:59

16 So do you -- do you recognize it now?

17 A. Yes, I recognize it, yes.

18 Q. And this is a document that you used as
19 the source for information about seven of your
20 eight store listings in table 4, correct? 03:02:17

21 A. I think I -- I used this for specific
22 data for those stores.

23 Q. For seven out of the eight, correct?

24 A. Yes, for most of them, yes.

25 Q. Okay. And then the eighth store is the 03:02:36

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1 Microsoft Store, and you got that information or 03:02:38

2 data from another Microsoft document, correct?

3 A. Correct. The one that ends in 348.

4 Q. Okay. And your table 4 relies

5 comprehensively on data from Microsoft, correct? 03:02:50

6 MR. HARRINGTON: Objection to form.

7 THE DEPONENT: Well, I -- I don't know

8 what -- what you mean by that. I mean, this is

9 where I was able to find data.

10 Q. (By Mr. Swanson) Well, is the fact that 03:03:03

11 this was able -- where you were able to find data

12 make it reliable for your purposes?

13 MR. HARRINGTON: Objection to form.

14 THE DEPONENT: Well, I don't see any --

15 any reason why these stores should not be in the 03:03:17

16 PC -- Windows PC yardstick for me.

17 Q. (By Mr. Swanson) Okay. Do you have any

18 understanding about how this document was prepared?

19 A. Which document?

20 Q. Exhibit 33. 03:03:37

21 A. How was it prepared?

22 Q. Sure.

23 A. I mean, I -- I -- I can only see the

24 document like you see it. I don't see how it was

25 prepared. 03:03:52

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1 Q. Did you read any testimony about the 03:03:53
2 document?

3 A. I don't believe so.

4 Q. Do you know who at Microsoft prepared it?

5 A. No, I don't know that. 03:04:06

6 Q. Do you know if this was a draft or a
7 final version of the document?

8 A. I'm not sure. It doesn't say "draft," so
9 I assume it's the final document.

10 Q. Now, isn't it the case that in table 4, 03:04:25
11 you were looking at stores that all either
12 exclusive or predominantly sell game apps?

13 A. Well --

14 MR. HARRINGTON: Objection to form.

15 THE DEPONENT: I -- I am not sure. I 03:04:48
16 think Microsoft sells all kinds of things. Not --
17 all kind of apps, not just games.

18 Q. (By Mr. Swanson) And you had a breakdown
19 between game and nongame apps with respect to that
20 705-million-dollar figure in table 4, correct? 03:05:03

21 A. I don't see the breakdown right here.

22 Q. No, you -- well, you had it from another
23 Microsoft document, correct?

24 A. Yes, that's correct.

25 Q. Okay. And isn't it the case that more 03:05:21

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1 than 99 percent of the sales that you report in 03:05:23

2 table 4 are for game apps?

3 A. I don't know how you got to this number.

4 Q. By mathematics.

5 Do you know that? Are you -- are you 03:05:35

6 disputing that?

7 MR. HARRINGTON: Objection. Form.

8 THE DEPONENT: Well, if you tell me how

9 the mathematics work, how you did it, I would be

10 able to not dispute it. 03:05:45

11 So you're assuming that all sales at

12 Valve are games, all sales in Epic are games, all

13 sales in Prison Guard games and so on?

14 Q. (By Mr. Swanson) Well, what you are

15 assuming? 03:05:57

16 A. Well, you're making the contention, not

17 me.

18 Q. I'm just asking you questions. What are

19 you assuming?

20 A. Well, I -- I have not examined in detail 03:06:04

21 how much of the Valve sales are games and so on.

22 And I know, for example, from data from Amazon --

23 sorry, from Microsoft itself, that there is --

24 there is a breakdown to games and nongames.

25 Q. Okay. 03:06:24

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1 A. But I haven't seen the specific numbers 03:06:26
2 for the other stores.

3 Q. Well, are you assuming that the breakdown
4 for the other stores would be similar to Microsoft?

5 A. I'm not assuming anything. I said that I 03:06:41
6 have not examined it, so, therefore, I am not going
7 to be able to say yes or no to your -- to your
8 question.

9 Q. Does the Microsoft breakdown that you
10 relied upon show that games accounted for the great 03:06:53
11 bulk of Microsoft sales that you're reporting?

12 MR. HARRINGTON: Objection to form.

13 THE DEPONENT: Yes.

14 Q. (By Mr. Swanson) Okay. Does your
15 yardstick apply to nongame apps? 03:07:08

16 A. Yes.

17 Q. And what do you base that on?

18 A. Well, you know, we are trying to create a
19 yardstick for the but-for world using other markets
20 because we are unable to see a but-for world in 03:07:33
21 early years.

22 There was never competition allowed by
23 Apple, so we're kind of forced to discuss
24 comparable stuff, comparable markets, and this
25 comparability is not going to be perfect, and we 03:07:56

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1 know that before we start. So we do the best we 03:07:59
2 can to find the -- the -- the comparable stuff.

3 But I have no reason to believe that the
4 commission rates for PC stores, if -- if I included
5 other PC stores that were not so much game 03:08:19
6 oriented, would have been lower than the effective
7 commission rate here.

8 So I believe that, if anything, I'm
9 conservative in this approach.

10 Q. Are you being conservative or inaccurate? 03:08:40

11 MR. HARRINGTON: Objection to form.

12 THE DEPONENT: I already said
13 conservative.

14 Q. (By Mr. Swanson) Okay. Is your
15 objective to be accurate in compiling your 03:08:50
16 estimates?

17 A. My objective is to find the best estimate
18 I can find for a situation which has been created
19 by Apple so that we are totally unable to find the
20 but-for world -- a period with a but-for world 03:09:12
21 present so we can do a before-and-after kind of
22 calculation.

23 So that's my best estimate, and I showed
24 it there. And, again, I think that the effective
25 commission rate is relatively conservative compared 03:09:29

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1 to another calculation that I might have done on 03:09:34
2 another yardstick.

3 Q. What other PC stores that were not so
4 much game oriented are you aware of that charge
5 lower than your yardstick rate? 03:09:50

6 A. As we sit here, I wouldn't be able to --
7 to give you an answer on that.

8 Q. Well, you gave me an answer that it was
9 conservative because there were such stores, so are
10 you just making that up? 03:10:03

11 MR. HARRINGTON: Objection.

12 THE DEPONENT: Well, you -- it's -- I'm
13 not making it up. But it's just my -- my feeling
14 that -- that the -- the -- the game stores in
15 general have higher effective commission rates than 03:10:23
16 the -- the known game stores, and this is kind of a
17 general kind of issue. I wouldn't be able to give
18 you very substantial further arguments on that.

19 Q. (By Mr. Swanson) Is that because game
20 app transactions are in a different market than 03:10:47
21 nongame app transactions?

22 A. I wouldn't say that.

23 Q. What would you say? What's the
24 explanation?

25 A. I don't have a great explanation for 03:10:59

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1 correct? 03:12:08

2 A. Correct.

3 Q. And WeGame is by far the largest weight

4 in your yardstick calculation, correct?

5 A. Because of the high sales, yes. 03:12:17

6 Q. In China, correct?

7 A. Yes.

8 Q. Okay. Don't you want to exclude the

9 Chinese market from your yardstick?

10 A. I don't see a compelling reason to 03:12:33

11 exclude it.

12 Q. Okay. What would happen if your

13 yardstick analysis excluded WeGame? Would the

14 average that you calculate increase substantially

15 from [REDACTED] percent? 03:12:49

16 A. It would increase.

17 Q. Do you know by how much?

18 A. I don't know by how much because I

19 haven't done that.

20 Q. Okay. Do you know if the sales that you 03:13:01

21 report for Blizzard are all sales on its U.S.

22 storefront?

23 A. I think so, but I'm not completely sure.

24 Q. Okay. What have you done to verify that

25 these numbers, aside from WeGame, are U.S. sales? 03:13:23

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1 A. I've asked my staff to do that, and I 03:13:27
2 believe they have.

3 Q. And do you believe all the Steam numbers
4 are for U.S. sales?

5 A. I believe so. 03:13:39

6 Q. Okay. And if they aren't, you would want
7 to adjust the figure to reflect just U.S. sales,
8 correct?

9 MR. HARRINGTON: Objection. Form.

10 THE DEPONENT: Well if -- if there 03:13:49
11 aren't, then we have to adjust, yes, that's --
12 that's -- that's correct, if we're looking for a
13 Windows PC stores measure that is just U.S.

14 Q. (By Mr. Swanson) Now, six of the eight
15 listings you've got here in table 4 are either Epic 03:14:06
16 or effective commission rates that are calculated
17 based on assuming Epic's cost structure, correct?

18 A. Yes.

19 Q. Okay. Except that with respect to Steam,
20 you -- you assume that Steam does not incur a 03:14:25
21 20-million-dollar annual fixed cost for
22 self-distribution, correct?

23 A. Well, I have a special backup on Steam,
24 yes.

25 Q. And why -- why do you assume there is no 03:14:38

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1 20-million-dollar annual fixed cost for Steam 03:14:41
2 self-distribution?

3 A. I'm not -- I don't recall at this point
4 in time. I think there was some very specific
5 dig-down in the -- in the Steam numbers, and we got 03:15:00
6 to a -- to a different number than -- than Epic.

7 Q. Do you agree that the vast majority,
8 almost 70 percent of the sales you report in
9 table 4, are for self-distribution?

10 A. I -- I haven't done the calculation, but 03:15:20
11 I think that makes sense. Although -- yeah, go
12 ahead. Yeah.

13 Q. And you estimate the costs for those
14 sales based on Epic's cost, correct?

15 A. Generally, yes, except for Steam, which 03:15:36
16 has a different calculation.

17 Q. What degree of confidence do you have in
18 your [REDACTED] percent yardstick?

19 A. I'm very confident on it. I -- I think
20 it's based on objective data. And I'm confident 03:15:51
21 about the -- the -- the costs of self-distribution
22 that come from -- from Epic.

23 And I think that this is a reasonable
24 yardstick that -- you know, for -- for a situation
25 in which, unfortunately, because of the other 03:16:18

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1 anticompetitive actions of Apple, we don't have a 03:16:20
2 before and after period, in which in the before
3 period there was -- there was the but-for world.

4 Q. Have you made any assessment of what the
5 median Windows PC app distribution commission rate 03:16:37
6 is in that market?

7 A. You mean the median among the eight ones
8 here.

9 Q. Sure.

10 A. No, I have not done that. 03:16:50

11 Q. Can you identify any transaction on any
12 Windows PC app distribution platform for third
13 parties that incurred a [REDACTED] percent commission?

14 MR. HARRINGTON: Objection. Form.

15 THE DEPONENT: Can you say -- can you say 03:17:11
16 the -- the question again?

17 Q. (By Mr. Swanson) Can you identify any
18 transaction on any Windows PC app distribution
19 platform for third parties that incurred a
20 [REDACTED] percent commission rate? 03:17:24

21 MR. HARRINGTON: Same objection.

22 THE DEPONENT: Well, I mean, you're
23 talking about the -- the -- the -- the ones with
24 the list, right. So nobody -- [REDACTED] is the -- the
25 average. So nobody has exactly [REDACTED]. Epic has 03:17:41

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1 12, for example. Lower than that, so... 03:17:46

2 Q. (By Mr. Swanson) And if you look at the
3 three that you've got here that actually offer
4 distribution, in your terms, to third parties, the
5 rates that they are charge are 30, 25, 20, 15. And 03:18:00
6 Epic charges 12, right?

7 A. Where is the 30, 25, 15? I don't -- I
8 don't see that. I see 25 from Steam. I see 12
9 from Epic. And I see 28 from Microsoft. I don't
10 see the other ones. 03:18:22

11 Q. (By Mr. Swanson) Well, is it your
12 opinion that Epic charges 25 on any transaction,
13 other than those over \$10 million, but less than
14 \$50 million?

15 A. Well, I reported the effective commission 03:18:33
16 rates, which is going to be for sure an average. I
17 mean...

18 Q. All right.

19 A. So you -- you went back to some other
20 kind of list pricing and so on. I'm only talking 03:18:48
21 about the average commission, effec- -- effective
22 commission rate.

23 Q. Right.

24 And in terms of the actual list of
25 commissions that these online stores charge, is it 03:18:58

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1 not a fact that that list is 30, 25, 20, 15 and 12? 03:19:00

2 A. I -- I don't know where you got those.

3 Q. Well, are you aware that Steam charges a

4 30 percent commission on every single app sale up

5 to \$10 million in revenues? 03:19:22

6 A. Yes, I'm aware of that.

7 Q. So if Steam charges 30 percent, does

8 Steam charge 25 percent on app sales that exceed

9 \$10 million, but that do not hit \$50 million?

10 A. That's correct. 03:19:38

11 Q. So Steam also charges 25 percent then,

12 correct?

13 A. Well, for 50 -- over \$50 million, they

14 even have a lower percentage. So here we're

15 looking at the effective commission rate. 03:19:51

16 So even though you are telling me the

17 announcements of -- of the -- of the list pricing,

18 the important thing is what's the average effective

19 commission rate. And this is what the last column

20 of table 4 has. 03:20:05

21 Q. And how many developers on Steam are

22 charged the 25 or 20 percent commission for their

23 apps?

24 A. I -- I wouldn't be able to tell you. I

25 mean, we need to dig in the -- in the backup to 03:20:19

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1 find that out. 03:20:22

2 Q. Well, you have backup.

3 But isn't it a fact that it's less than
4 100?

5 A. I mean, obviously, you have -- you have 03:20:27
6 your backup. My backup in front of me -- in front
7 of you, which I don't have.

8 So, you know, maybe it's just less than
9 100. Okay. So...

10 This is -- I -- I don't understand this 03:20:38
11 line of argument. I'm -- I'm dealing with the
12 effective commission rate, the average. So the
13 average necessarily is going to be different than
14 the various tiers.

15 Q. Microsoft charged a 30 percent commission 03:20:59
16 in 2018 for game -- game and nongame apps; is that
17 your understanding?

18 A. Yes.

19 Q. Going back to Exhibit 33, can you --
20 let's -- let's switch -- switch to slide 45 in that 03:21:22
21 exhibit, if you can find that.

22 A. The one that is called "Profile: Valve"?

23 Q. Yes.

24 A. Uh-huh.

25 Q. And can you show me -- or at least infer 03:21:59

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1 for me -- that this is where you got your figure in 03:22:01
2 your table 4 of \$4,541,000,000 in Steam third-party
3 sales?

4 A. I believe so. I mean, at least the 1279
5 is the same and -- okay. And the 4541 is the same, 03:22:28
6 yeah.

7 Q. So this is where you got that information
8 that you put into your table 4, right?

9 A. Yes. And this is described in -- in the
10 footnote as well, in the backup. 03:22:42

11 Q. Now, you indicate that that 4541
12 corresponds to a 25 percent effective commission
13 rate; is that right?

14 A. Yes.

15 Q. Why does the small print on slide 45 say 03:23:02
16 that developers only get 73 percent?

17 Wouldn't that indicate an effective
18 commission rate of [REDACTED] percent?

19 A. Okay. You are on the same slide and
20 you're saying in the small print? 03:23:23

21 Q. Yeah. Lower left-hand corner.

22 A. You mean in the very bottom?

23 Q. Yeah. The thing that says "Note."

24 A. Okay. Let's see.

25 Q. It says "Reported revenue reflects total 03:23:38

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1 consumer spend; adjusted revenue deducts the 03:23:43
2 estimated 73% share paid to publishers from
3 Valve's" third -- "3P" -- third party -- "digital
4 store."

5 You understand publishers refers to 03:23:57
6 developers?

7 A. Yes.

8 Q. Okay. So Microsoft's estimate is that
9 Steam has an effective commission rate of
10 27 percent, correct? 03:24:07

11 A. Maybe they mean that. Maybe they mean
12 something else. I'm not sure.

13 Q. Well, you're relying on this document to
14 be accurate, are you not?

15 A. I'm relying on the numbers. But I think 03:24:27
16 I have another document with the -- the
17 calculation -- let me try to find my backup one
18 more time. Okay.

19 Q. You have a document --

20 A. Because I -- yeah. We -- we are -- we 03:24:37
21 are talking in circles here. Okay. So...

22 Q. I don't think so.

23 You have a Valve/Steam document that
24 shows an actual effective commission rate, correct?

25 A. Yes. 03:24:52

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1 Q. And it's different from Microsoft's 03:24:53
2 estimate, correct?

3 A. Uh-huh. Uh-huh. That's correct.

4 Q. So Microsoft doesn't have the most
5 accurate information in this document, this 03:25:02
6 Exhibit 33, does it?

7 A. Well --

8 MR. HARRINGTON: Objection to form.

9 THE DEPONENT: -- that's what you say. I
10 mean -- they -- am I -- am I not allowed to make 03:25:10
11 calculations? I mean, we have to take whatever
12 Microsoft says in face value?

13 Q. (By Mr. Swanson) Well, that's what
14 you're doing, isn't it?

15 MR. HARRINGTON: Objection. Form. 03:25:21

16 THE DEPONENT: No, that's not what I'm
17 doing. I mean, you said it yourself, that I'm
18 doing something different than what my Microsoft
19 says. So that Microsoft said it has to be whatever
20 you read in the small footnote down there, and I 03:25:30
21 have a different number.

22 Q. (By Mr. Swanson) Well, are you talking
23 the 4541 face value?

24 A. Yes, I am.

25 Q. And you indicate in table 4 that these 03:25:48

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1 are sales for 2019; is that right? 03:25:51

2 A. Let me see.

3 That is correct.

4 Q. Okay. And are these estimates in the
5 Microsoft document, in Exhibit 33, are those from 03:26:17
6 2019?

7 A. Well, the document was created in
8 May '20. So it's extremely likely that these are
9 from 2019.

10 Q. So is it extremely likely that all the 03:26:54
11 figures in this Microsoft document reported for
12 third parties are from 2019?

13 A. Well, now you're -- you're stretching my
14 memory. I mean, this is a multipage document. We
15 need to spend some time looking at every page 03:27:07
16 before I can say something -- something like
17 that -- an opinion like that.

18 Q. Okay. Well, we'll -- don't worry. We'll
19 look at some more pages.

20 You -- you actually have information from 03:27:17
21 Valve about Steam's total sales, do you not?

22 A. Yes.

23 Q. Doesn't the information that you have
24 available to you directly from Valve show
25 approximately \$958,000,000 of total sales on Steam 03:27:40

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1 for 2019? 03:27:45

2 A. That is correct.

3 Q. Well, then why are you taking a face

4 value a figure of 4541 which is over 4 billion?

5 A. Well, I wouldn't be able to -- to answer 03:28:01

6 this without looking at this a bit further.

7 Q. Now, the 1279 number in your table 4 also

8 comes from this Microsoft document, slide 45,

9 correct?

10 A. Correct. 03:28:28

11 Q. And you associate that with a 9 percent

12 effective commission rate?

13 A. That's correct.

14 Q. If Steam actually had the same cost

15 structure as Epic, wouldn't you add an extra 03:28:40

16 \$20 million to their annual cost to calculate an

17 11 percent effective commission rate, not a

18 9 percent rate?

19 A. Yes. We -- we have found this in a

20 different way, the one on Steam. 03:28:55

21 Q. Moving to the Epic numbers in your

22 table 4, the [REDACTED] sales figure that you

23 report for Epic Games store, third-party sales,

24 does that come from slide 48 in the Microsoft

25 document? 03:29:27

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1 THE DEPONENT: Let me see. I think maybe 03:29:32
2 it's time to take a break, if that's okay with you.
3 MR. SWANSON: Yes. Yeah, that's
4 perfectly fine.
5 THE DEPONENT: Thank you very much. Ten 03:29:40
6 minutes.
7 MR. SWANSON: Uh-huh.
8 THE VIDEOGRAPHER: We're now going off
9 the record. The time is 3:29.
10 (Recess taken.) 03:32:23
11 THE VIDEOGRAPHER: We're now back on the
12 record. The time is 3:43.
13 Q. (By Mr. Swanson) Professor, in the
14 but-for world --
15 A. May -- may I, Mr. Swanson. I had a 03:43:53
16 chance to review the Valve backup that I have, and
17 it does look like the effective commission rate was
18 exactly right, 25 percent.
19 I'm not sure why Microsoft says it's 27,
20 but there is an actual real calculation of the -- 03:44:17
21 of the Valve effective rate taking into account all
22 the transactions that have happened in Valve. So
23 this was kind of created from scratch. So they --
24 the numbers I -- I have are -- are, in fact,
25 correct. 03:44:40

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1 Q. And have you confirmed that the 03:44:44
2 4,541,000,000-dollar figure is correct as well?

3 A. Well, I have a -- a -- a figure that
4 is -- that is the -- the net sales number, which
5 looks very much confirming the 4.5 billion. Okay. 03:45:09
6 So -- because of the -- okay, that's right.

7 So -- that's correct. I mean, I looked
8 at the backup and I think we can replicate it, and
9 it -- it shows the -- that this is the right number
10 that's 25 percent and not 27 as Microsoft says. 03:45:31

11 Q. Yeah, no, I understood that. I was
12 asking if you confirmed that the 4541 number in
13 your table 4 is accurate.

14 A. I believe so.

15 Q. Did you look at your backup data on that 03:45:50
16 point?

17 A. Yes.

18 Q. Okay. In the but-for world, based on
19 your Windows PC app distribution yardstick, do you
20 assume that all iOS App Stores, including the 03:46:07
21 Apple App Store, would charge the same [REDACTED] percent
22 commission rate to developers?

23 MR. HARRINGTON: Objection to form.

24 THE DEPONENT: I assume that this would
25 be the rate they're going to -- to charge, yes, 03:46:29

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1 that's correct. 03:46:33

2 Q. (By Mr. Swanson) Based on that same
3 yardstick, is it your opinion that if Epic Games,
4 in the but-for world, opened an iOS App Store,
5 that it would charge a [REDACTED] percent commission? 03:46:44

6 A. Well, we are talking about the average
7 commission here. So it's -- it is conceivable that
8 Epic might charge less, like 12 like they want to,
9 and the others will charge more, but on the
10 average, it's going to be [REDACTED]. 03:47:02

11 So the developer damages is expecting, in
12 the but-for world, on the average, [REDACTED].

13 Q. But it's conceivable that the Apple
14 App Store would charge 30 percent in the but-for
15 world and Epic would charge 12? 03:47:21

16 MR. HARRINGTON: Objection.

17 THE DEPONENT: Well, I would find it hard
18 to believe that Apple would stick with -- with 30
19 because it's going to be competitive pressure to --
20 to cut that -- that rate, first of all. 03:47:34

21 Second, even if the Apple Store charges
22 30, developers will have a choice, and not only
23 they could sell everything they -- they want to
24 sell through Epic, but also they could break their
25 sales through different stores. So some are going 03:48:04

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1 to go through Apple. Some are going to go through 03:48:07
2 others.

3 So -- so on the first hand, I think that
4 it would be hard for Apple to stay at 30 percent.

5 And second, the developers will benefit 03:48:17
6 even if Apple stays at 30 percent, which I said
7 it's very unlikely, because the other stores are
8 going to be around and they will have, on the
9 average, the opportunity to realize the
10 [REDACTED] percent commission. 03:48:35

11 Q. (By Mr. Swanson) In the but-for world,
12 would larger developers, for example, those who
13 have apps that earn more than \$10 million in
14 revenue, receive lower commission rate?

15 A. Well, that's conceivable. But this is 03:48:52
16 not necessarily a part of my calculation. I am
17 calculating an average rate, and that's what I
18 think is -- is correct.

19 But as you did see, the average rate
20 comes partly through Steam, and Steam has a 03:49:09
21 variation of tiers. So it's not -- it's not
22 inconceivable that there will be some variation in
23 tiers, but the average developer should expect to
24 get [REDACTED] percent.

25 Q. In the but-for world, in your opinion, 03:49:31

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1 would large developers or small developers be more 03:49:33
2 likely to be charged the lowest commission rate?
3 A. I'm not sure I -- say it again one more
4 time?
5 Q. Yeah. In the but-for world, in your 03:49:50
6 opinion, would large developers or small developers
7 be more likely to be charged the lowest commission
8 rate?
9 MR. HARRINGTON: Objection to form.
10 THE DEPONENT: The way I have calculated 03:50:03
11 my -- my yardstick is for the average, the --
12 you know, developer, the average -- sorry, what
13 every developer, on the average, expects to get.
14 Q. (By Mr. Swanson) Okay. You have a
15 second yardstick, correct? 03:50:22
16 A. Yes.
17 Q. And that's estimated based on profit
18 margins of a group of online marketplaces with
19 agency-based businesses, right?
20 A. Correct. 03:50:40
21 Q. Which of your two yardsticks do you
22 consider to be more reliable?
23 A. Well, I'm confident in both, and the fact
24 that they bring out very close results in terms of
25 the average commission gives me extra confidence 03:50:54

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1 Q. Does economic logic predict that an 03:52:33
2 entrant would charge a profitable price?

3 A. Well, if -- if -- the entrant has to be
4 successful in -- in being profitable. Otherwise,
5 it will not survive. 03:52:49

6 Q. When an entrant a below-cost price, what
7 does economic logic predict about the price that
8 will be charged by the incumbents?

9 MR. HARRINGTON: Objection.

10 THE DEPONENT: I'm not sure I understand 03:53:01
11 the premise of your -- of your question. You know,
12 the -- the entry -- the entrant has to break even,
13 at least, in the long run. I mean, it cannot
14 surface otherwise, so the premise of your question
15 kind of falls apart. 03:53:21

16 Q. (By Mr. Swanson) How many firms have
17 entered the Windows PC app distribution market
18 since 2008?

19 A. I -- I haven't examined exactly that
20 number. 03:53:38

21 Q. Was Epic a competitor of Steam before
22 Epic opened its door in 2018?

23 A. Not before it opened its door. I mean,
24 in the sense of app distribution competition.

25 If you're asking do they make games, 03:53:58

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1 yeah, they make games, so -- but -- so they could 03:54:00
2 be competing in other ways, but in terms of the
3 market we care about, which is app distribution,
4 no.

5 Q. So you believe that Epic's 03:54:11
6 self-distribution of Fortnite prior to the
7 Epic Games store's debut was not competitive with
8 Steam?

9 A. Well, I -- maybe I misspoke. I only
10 thought that you were -- they were asking the 03:54:29
11 question about the third-party store.
12 Self-distribution is, of course, competitive with
13 every other store, including Steam.

14 Q. Okay. So Epic was a competitor of Steam,
15 in your opinion, before Epic opened its third-party 03:54:42
16 game store in 2018?

17 A. Yes.

18 Q. What was Epic's market share before it
19 opened its third-party game store?

20 A. Market share in what market? 03:54:59

21 Q. The Windows app, PC distribution
22 market --

23 (Simultaneously speaking.)

24 THE DEPONENT: I'm sure we have it
25 somewhere in the -- in the backup, but I -- I 03:55:08

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1 don't -- I don't -- I don't recall off the top of 03:55:11
2 my head.

3 Q. (By Mr. Swanson) Did Steam's market
4 share drop in 2019 after the entry of Epic Games
5 store? 03:55:25

6 A. I do not recall.

7 Q. Does economic logic predict that the
8 entry of the Epic Games store into the Windows PC
9 app distribution market for third parties would
10 drive down Steam's price? 03:55:41

11 A. Yes, over time, that it will drive it
12 down, yes.

13 Q. Uh-huh.

14 A. You mean -- by price, you mean the fees,
15 right? 03:55:53

16 Q. Yes. Commission.

17 A. Uh-huh.

18 Q. Is that what you meant?

19 A. Yes.

20 Q. Yeah. 03:55:59

21 Turn, please, to your table 5, which is
22 on table -- on page 25.

23 A. Yes.

24 Q. This is a table you use for your second
25 yardstick; is that correct? 03:56:19

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1 A. That's right. 03:56:20

2 Q. Uh-huh. And you base your profit margin
3 analysis on the profit margins for eBay, Etsy,
4 Rakuten, Mercado Libre and Alibaba, right?

5 A. That is correct. 03:56:41

6 Q. And at least one reason why you used
7 these stores is because they are all marketplaces
8 that charge commissions?

9 A. That is correct.

10 Q. None of them are app marketplaces, 03:56:50
11 correct?

12 A. There is some parts of Alibaba and
13 Rakuten that are app marketplaces.

14 Q. Do you know if the percentages that you
15 report in table 5 apply to the app portion of their 03:57:03
16 respective businesses?

17 A. Yes, in terms of these two that I
18 mentioned, the Rakuten and Alibaba's.

19 Q. And -- and what is the -- well, are --
20 are you reporting the -- the operating margins for 03:57:20
21 Alibaba's app marketplace?

22 A. That is correct. It comes from
23 Mr. Tregillis' report.

24 Q. Flip to paragraph 48, please. And I
25 wanted to ask you about something in that long 03:58:13

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1 final sentence that carries over onto page 27, the 03:58:22
2 one that starts, "An Epic planning document."

3 Do you see that?

4 A. Yes.

5 Q. I'm not going to read that out loud, 03:58:31
6 it'll take too long. We're all tired of hearing
7 me.

8 But you have a parenthetical there
9 indicating that it seems to have been the case that
10 Steam reacted to the entry of Epic Games store? 03:58:44

11 A. That is right.

12 Q. Okay. Are you aware that after Steam
13 reacted, it retained its 30 percent base commission
14 rate?

15 MR. HARRINGTON: Objection to form. 03:59:02

16 THE DEPONENT: Well, I'm not sure what
17 exactly you are -- you are describing. I hear
18 we -- my understanding is that Epic says that it
19 could capture 50 percent if Steam doesn't react and
20 35 if Steam reacts. And it looks like Steam 03:59:18
21 reacted. So 35 makes sense as -- and as a -- as a
22 potential number percentage that an entrant might
23 achieve.

24 Q. (By Mr. Swanson) Well, when you say it
25 appears that Steam reacted, are you denying that 03:59:37

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1 Steam retained its default 30 percent commission 03:59:41
2 rate?
3 MR. HARRINGTON: Object to form.
4 THE DEPONENT: I'm not denying that. But
5 it -- it looks like there was some reaction, at 03:59:50
6 least, to -- to try to -- to achieve as much as
7 possible no loss of market share.
8 Q. (By Mr. Swanson) Was Steam's reaction to
9 the entry of Epic Games store consistent with what
10 economic logic predicts when additional rivals 04:00:12
11 enter the market?
12 A. Yes -- I mean, yes. In general, yes.
13 Q. Okay. Now, in paragraph 48, you state
14 that 35 percent -- this is on the top of page 27.
15 You state that "35% is the single entrant 04:00:32
16 market share that is currently best supported by
17 the evidence."
18 Do you see that?
19 A. Yes.
20 Q. When you refer to the "evidence," are you 04:00:44
21 including Steam's reaction to the entry of
22 Epic Games store?
23 A. Yes.
24 Q. Do you agree that in the single entrant
25 scenario that you're analyzing, that the Apple 04:00:54

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1 App Store would have a 65 percent market share? 04:00:58

2 A. That is correct. It's written in --
3 explicitly in table 6.

4 Q. And in the two entrant scenario that you
5 analyzed the Apple App Store would have a 04:01:07
6 50 percent market share?

7 A. That's also true in table 6.

8 Q. Did you do any analysis to figure out why
9 you would assume that the two entrants would have
10 25 percent market share each? 04:01:25

11 A. Well, it's a modest assumption that two
12 entrants would come in with 25 percent each. So it
13 still leaves Apple with 50 percent market share.
14 But the -- the effect of entry is that it pushes
15 down the but-for average commission rate. 04:01:51

16 Q. Did you do any analysis to determine if
17 Epic actually attained a 35 percent market share
18 with its Epic Games store?

19 A. No. And this is not a discussion just
20 about Epic. This is a hypothetical discussion of 04:02:15
21 entry in the but-for world in the iOS app
22 distribution market.

23 Q. In Epic's analysis of what market share
24 it would expect if Steam reacted, was it including
25 market share attributable to self-distribution, as 04:02:39

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1 well as market share for third-party distribution? 04:02:43

2 A. I do not recall at this point. But I
3 think that it was mostly third-party distribution.

4 Q. Can you calculate Epic's share based on
5 your table 4? 04:03:03

6 A. You mean Epic's share among the six or
7 eight firms there, or Epic's share in terms of the
8 whole market for Windows PC distribution?

9 Q. Either way. Let's first start with the
10 third-party sales. 04:03:33

11 You've got a [REDACTED] figure for Epic
12 in 2019, correct?

13 A. Yeah, but that's -- as you -- you were
14 saying before, that's the first year they entered,
15 so yes. So it's kind of -- 04:03:47

16 Q. Okay.

17 A. -- not -- not even, I think, a full year.

18 Q. Okay. So that's about [REDACTED] of the
19 total third-party sales on Steam, Microsoft Store
20 and Epic Games store, correct? 04:04:04

21 A. I mean, you're good at making these
22 calculations on top of your head and I'm not. But
23 I'll take your number for it at this point.

24 Q. The percentage that [REDACTED] reflects
25 compared to the total sales in table 4 is very 04:04:25

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1 small. 04:04:31

2 Would you not agree?

3 A. Well, I mean, here, we're talking about a

4 yardstick for Windows PCs. And somehow we are

5 taking the first year entry of -- of Epic and 04:04:49

6 saying this is all they're going to -- to achieve.

7 Like in the "Rate Yardstick" backup,

8 where we see the projections of Epic, they claim

9 that in 2024 their size would be about

10 [REDACTED]. So that's completely different than 04:05:14

11 the [REDACTED] that they have right now. So they

12 are projecting they're going to be [REDACTED]

13 times larger in a few years.

14 Q. And making that assumption and even

15 assuming all the other sales in table 44 remain the 04:05:33

16 same, would they have a 35 percent share of the

17 Windows PC app distribution market?

18 A. I mean, again, my discussion of the one

19 entrant with -- with 35 percent is for the app

20 market for iOS. It's not a prediction about what 04:06:00

21 does -- Epic would do or it has done or will do

22 in the -- the Windows PCs stores market.

23 Q. In -- in either of your iOS but-for

24 scenarios with either one or two entrants, isn't it

25 a fact that Apple would benefit from substantial 04:06:30

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1 indirect network effects with its 50 to 65 percent 04:06:32

2 market share?

3 A. It would benefit in what way, did you

4 say, substantial?

5 I mean, can you say -- can you break it 04:06:48

6 down a bit more?

7 Q. Yes.

8 I'm referring to your scenarios for the

9 but-for world where there are either one or two

10 entrants. 04:07:00

11 Are you with me?

12 A. Uh-huh.

13 Q. And you agree that in either of those

14 scenarios, Apple would have at least 50, and as

15 high as 60 percent -- 65 percent of the iOS app 04:07:11

16 distribution market, correct?

17 A. Uh-huh. Yes.

18 Q. So relative to its rivals in those

19 scenarios, wouldn't Apple benefit

20 disproportionately from substantial indirect 04:07:23

21 network effects?

22 A. Well, if -- if you look carefully at --

23 at table 6, you can see that the but-for Apple

24 profit margin is relatively high compared to the

25 entrant margin. 04:07:48

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[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
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[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] 04:10:01

6 Q. When you referred to page 54, did you
7 mean paragraph 54?

8 A. I'm sorry. Thank you. Paragraph 54.

9 Q. Professor, are you familiar with the term
10 "critical mass" in the context of two-sided 04:10:12
11 platform?

12 A. People use it differently.

13 Q. How do you use it?

14 A. I use the word "critical mass" -- and I
15 have written it in a number of academic papers -- 04:10:25
16 as the size where the network starts. Like in a --
17 in a -- in a traditional market, the network
18 starts -- I'm sorry -- in a traditional market, as
19 you cut price, the market starts at very small
20 numbers, at very small percentages. 04:10:45

21 But if you have significant network
22 effects, the market can start at a significant
23 percentage of the market. Let's say, 25 percent,
24 or something -- something higher. And that's what
25 I call critical mass. Other people use it 04:11:00

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1 differently. 04:11:03

2 Q. I -- I apologize.

3 What -- how do you define critical mass?

4 It's -- it's the point at which

5 substantial network effects are achieved? 04:11:13

6 A. No. The way I define it is -- let me
7 start with a -- with a simpler world.

8 Suppose we have a world in which some --
9 some new innovation happens. For example, the fax.
10 So the fax happens, but its cost is high. And then 04:11:46

11 because of technological change, its costs goes --
12 gets lower and lower and lower. And at some point
13 in time the market explodes. A lot of people buy
14 fax machines. We see the -- the network effects
15 and everything else. 04:12:03

16 And that's the point in which I would
17 call the point of critical mass. And I have
18 written this in academic papers. I can point out
19 to you where.

20 Q. Okay. How long, in your opinion, would 04:12:15
21 it take a new entrant into the iOS app
22 distribution market to attain critical mass?

23 MR. HARRINGTON: Objection.

24 THE DEPONENT: Well, again, we are
25 talking about critical -- you are talking about 04:12:32

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1 critical in your own terms rather than in my terms. 04:12:34

2 But if you're saying how long it would
3 take for him to have substantial market share, I
4 would say that's not necessarily a long time.

5 Because once people understand that this entrant -- 04:12:48
6 once the developers understand that this entrant
7 has a lower but-for commission rate, then people
8 are going to flock to him. So that's the way I --
9 I -- I see it.

10 But even if the entrant takes time to 04:13:10
11 reach the share that I mentioned in table 6, there
12 is still going to be an impact on -- on Apple and
13 on the average commission rate because the entrant
14 one or two is going to be there in the market and
15 put pressure on competition in -- for the -- for 04:13:35
16 the -- for Apple distribution. So it will put
17 pressure on Apple on app distribution.

18 Q. (By Mr. Swanson) Using your definition
19 of the term, what happens to an entrant that does
20 not achieve critical mass? 04:13:51

21 A. Well, an entrant that does not achieve
22 the -- the percentage that I said could fail.

23 Now, the way that -- that I have
24 introduced the entrants, 35 percent, 25 percent, 25
25 percent, in the second case, you know, these 04:14:16

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1 entrants make profits as they come in. 04:14:20

2 So I don't have them teetering to the
3 edge so that they would fail. If they don't get
4 35 percent, then they go out of business. That's
5 not the -- the way the -- the numbers work. 04:14:34

6 And I have to say one more thing about
7 this, is that I burdened the entrants, even though
8 they have relatively small percentages market
9 share, with the full fixed costs of Apple, [REDACTED]

[REDACTED] 04:14:55

11 And they also grew over time. So I
12 burdened them with the latest big number of fixed
13 costs.

14 So I'm doing this because I'm doing this
15 in a very conservative way. So I use the full 04:15:10
16 fixed cost of Apple even though these entrants are
17 much, much smaller. So I'm doing it in a very
18 conservative way.

19 Q. When did Apple's App Store attain
20 critical mass in the -- in the actual world? 04:15:31

21 MR. HARRINGTON: Objection.

22 THE DEPONENT: I haven't looked at that.
23 I mean, I -- I really only looked at the actual
24 world from the beginning of the class period in
25 2015. 04:15:43

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1 Q. (By Mr. Swanson) In paragraph 49, you 04:15:47
2 state that, "More stores beyond two are certainly
3 possible"?

4 A. Yes.

5 Q. Do you see that? 04:15:57

6 Is it your opinion that more stores in
7 the but-for world beyond two are probable, not just
8 possible?

9 A. Well, I haven't formed an opinion
10 whether -- whether they are probable. I -- I would 04:16:11
11 say that given the -- the difficulties in
12 attracting people from both sides of the market,
13 entry is not going to be huge. Like, I definitely
14 don't expect ten stores or seven stores, and
15 probably much, much smaller. 04:16:36

16 It is conceivable there might be
17 three stores. It is conceivable there might be
18 four entrants. It's possible.

19 The -- and I have thought, although
20 they're not presented in the report, of some 04:16:50
21 calculations regarding this. Are they going to
22 survive, are they going to -- what effect will they
23 have on Apple, and so on.

24 And -- and generally speaking, the --
25 adding more stores, as long you don't add 20, 04:17:06

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1 right, as long as you add one or two more, is not 04:17:12
2 making a very significant effect -- a significant
3 effect, I should say. Doesn't make a significant
4 effect on the but-for commission.

5 Q. Have you modeled any scenario where Apple 04:17:31
6 maintains its default 30 percent commission rate in
7 the face of entry?

8 A. I think that would be unrealistic.
9 Really unrealistic. I mean, you might think very
10 highly of Apple, you might think they're huge, the 04:17:49
11 best thing that ever happened to the American
12 economy. Nevertheless, in the face of competition,
13 in the face of rivalry and entry, even Apple is
14 going to cut its commission rate.

15 It's extremely likely. 04:18:08

16 Q. Have you analyzed any scenario where
17 Apple changes its commission structure to the one
18 that Steam has in the event of entry?

19 A. I -- I -- I have not, and, you know, in
20 some way, because we have not observed the but-for 04:18:33
21 world, possibilities exist.

22 Nevertheless, I think that the
23 two benchmarks, the actual three benchmarks are
24 created, are realistic -- I mean are reasonable for
25 the calculation of the but-for world fees. 04:18:57

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1 Q. If I wanted to assume a different market 04:19:03
2 share other than 35 percent for one entrant
3 scenario, could I plug that different share into
4 your model and see what the commission turns out to
5 be? 04:19:18

6 A. It could be, yeah, I mean, you could do
7 that, but I -- I'm not sure why, but you could.

8 Q. Now, you mentioned earlier that you
9 assume that the entrants would have the same cost
10 structure as Apple in -- in the but-for world for 04:19:36
11 purposes of this one- or two-entrant analysis,
12 correct?

13 A. Correct.

14 Q. Are you assuming that the entrants would
15 also sell iOS devices? 04:19:47

16 A. I don't assume that the entrants sell
17 anything else except facilitate the -- the
18 distribution of apps. And, again, assuming that
19 the -- that the entrant, even though he's small
20 compared to Apple, has the same full fixed cost of 04:20:10
21 Apple, is extremely conservative.

22 Q. Are you assuming that the entrants would
23 not incur any costs for updating the iOS
24 operating system?

25 MR. HARRINGTON: Objection to form. 04:20:29

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1 THE DEPONENT: I -- I'm not so sure what 04:20:30
2 you mean by "updating the iOS operating system."
3 This is something that Apple does periodically.
4 What does it have to do with the entrants?

5 Q. (By Mr. Swanson) Well, our -- it's 04:20:43
6 related to questions I asked you earlier. Are you
7 assuming that the entrants did not pay any license
8 fee to Apple for use of its intellectual property?

9 A. Well, we agreed that what you call use of
10 intellectual property is just an API so that they 04:20:58
11 can connect to -- to the -- to the system so that
12 they can, in fact, survive, right? I mean,
13 otherwise, they wouldn't be able to survive.

14 So I -- I would assume that if the -- the
15 judge finds this story convincing, if -- if the 04:21:13
16 judge finds my report convincing, the judge will
17 impose a requirement on Apple to create an API
18 without any fees.

19 Now, if the judge doesn't do that, and
20 creates fees, then one can add these fees to my -- 04:21:36
21 or subtract these fees from the -- from the damage
22 calculation.

23 Q. That's clear.

24 Are you aware that there are 150,000 APIs
25 that Apple licenses to developers in the current 04:21:52

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1 world? 04:21:56

2 MR. HARRINGTON: Objection.

3 THE DEPONENT: I'm not aware of the
4 number, but like you said, these are APIs licensed
5 to developers, and here we're talking about not 04:22:03
6 licensing to developers, but licensing to the
7 stores, and also licensing to developers in a
8 different way so they can do self-distribution.

9 Q. (By Mr. Swanson) That -- that -- that is
10 the question. 04:22:21

11 Are -- are you assuming in your one- and
12 two-entrant scenarios that the entrants would not
13 incur any costs of iOS App Review?

14 A. I am assuming that whatever this cost of
15 App Review are, the \$99 that we had from the 04:22:41
16 present world, would stay the same if the judge
17 says that App Review by Apple is required no matter
18 how the distribution happens, even if it happens to
19 other stores.

20 Now, as we have said also before, if the 04:23:05
21 judge decides otherwise, if the judge says, Well,
22 you know, let everybody provide their own security,
23 then it's -- the world is going to be more
24 competitive, and the various App Stores are going
25 to compete for being the most secure. 04:23:24

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1 Q. In paragraph 51 of your report, at the 04:23:32
2 end of that paragraph, you indicate that you
3 "additionally assume that all firms in the market
4 would charge the same commission rate to
5 developers." 04:23:45

6 Do you see that?

7 A. Yes.

8 Q. Is that the assumption that you make when
9 you apply this yardstick in calculating injury and
10 damages in the but-for world? 04:23:57

11 A. Yes. But I should also say that,
12 you know, this assumption, it's much more innocuous
13 than you think. Because even if we created some
14 variation, it wouldn't make a big difference.

15 Let's say -- let me give you an example. 04:24:20
16 Suppose we go to the two entrants example in which
17 the entrants have 50 percent and Apple has
18 50 percent, and suppose that we say, Well, Apple
19 should be paid 3 percent more than the but-for
20 average commission rate. Okay. It's 3 percent 04:24:43
21 more. Not 3 percentage point. It's not going from
22 14 to 17, but 3 percent on the 14.8 -- or, sorry,
23 on the 13.

24 Okay. So suppose that's true, and at the
25 same time, you might say, Well, Apple is a great 04:24:58

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1 product so the entrants should, in fact, get paid 04:25:02

2 3 percent less.

3 So now we have a situation in which Apple

4 gets 3 percent more of the 13 percent and the

5 entrants get 3 percent less. 04:25:18

6 What difference does it make? None. The

7 average commission rate is going to be the same.

8 Some even though you varied the various -- the --

9 the -- the prices, the -- the -- the commissions

10 between developers and Apple, in the end it doesn't 04:25:37

11 make a difference.

12 And I make this example to show you that,

13 you know, it's not ominous at all. It's not

14 restrictive at all to say, It's the same number.

15 We calculate things at the same number, and you can 04:25:50

16 always have some small variations around these

17 numbers and it won't make a difference.

18 Q. Do you agree that it is unlikely that all

19 the rival iOS app distributors in the but-for

20 world would decide to charge the same commission 04:26:06

21 because there would be significant variation in the

22 different firms individually profit-maximizing

23 commissions?

24 A. Well, I don't quite see that -- that

25 being the -- the case. Here I assume that 04:26:20

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1 two entrants come in. They're identical entrants. 04:26:23

2 There is -- whatever their profit maximization is

3 going to be is going to be very similar between

4 these two companies.

5 I'm not saying it's going to be similar 04:26:37

6 to Apple, I'm saying it's going to be similar

7 between these two companies, and that would create

8 the same rate for them.

9 At the same time, it makes sense for

10 Apple to also accept the same rate because there's 04:26:47

11 going to be competitive pressure.

12 And the second part of the answer is what

13 I said in the previous question, that small

14 variations in the commission rates do not typically

15 make any significant change in the but-for average 04:27:08

16 commission rate.

17 Q. And just to be clear, you do not agree

18 that there would be a significant variation in the

19 different entrant firms individually

20 profit-maximizing commissions in the but-for world? 04:27:27

21 MR. HARRINGTON: Objection.

22 THE DEPONENT: Well, I -- I think I

23 already answered that firms that are very similar

24 in terms of their cost conditions, their abilities

25 and so on, are going to behave very, very 04:27:42

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1 similarly. And that's what I have in the 04:27:44
2 two entrants example.

3 Q. (By Mr. Swanson) Well, do you disagree
4 that Apple and its rival iOS app distributors in
5 the but-for world would have varying 04:27:57
6 profit-maximizing commissions because their
7 products would be vertically differentiated and
8 they would likely have different business
9 strategies?

10 MR. HARRINGTON: Objection to the form. 04:28:08

11 THE DEPONENT: Well, that's -- that's
12 assuming a lot.

13 Well, first of all, you assume they're
14 vertical differentiated. I'm not so sure. Why
15 would they be necessarily vertically 04:28:17
16 differentiated?

17 And then you say they're going to have
18 different profit strategies. Why? I mean, even if
19 you say that Apple has a different profit strategy
20 than the entrants, it's very hard to argue that the 04:28:30
21 two entrants, which are very similar, are going to
22 have different strategies from each other.

23 And, again, look at table 6. I allow
24 Apple to have a much bigger profit margin in both
25 one-entrant and two-entrant scenarios than the 04:28:48

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1 entrants. 04:28:51

2 So I'm really very conservatively giving
3 a lot to -- a lot of profitability to Apple, which
4 might be because of the reasons that you say,
5 vertical and so on. 04:29:04

6 Q. (By Mr. Swanson) Do you have any
7 scenario where an entrant charges a 12 percent
8 commission and earns a positive profit?

9 A. Well, not in the ones presented in the --
10 in the -- in the -- in the report. 04:29:24

11 Again, you should keep in mind, whether
12 the entrant should be burdened by the full
13 [REDACTED] of fixed costs that Apple has with
14 billions of sales, rather than the smaller fixed
15 costs. 04:29:50

16 And even if you go a few years back on
17 Apple's numbers, the -- the fixed cost is much,
18 much smaller. So we burdened the one entrant and
19 two entrants with the full cost, [REDACTED]

20 [REDACTED] [REDACTED]
21 [REDACTED]

22 So if we're going to go to small profit
23 margins, we should seriously think, well, maybe
24 we're burdening the entrants with too much of a
25 fixed cost, maybe we should change that. 04:30:32

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1 Q. Do you agree that in the but-for world 04:30:35
2 rival iOS app distributors would have difficulty
3 detecting changes in each other's commissions?

4 A. I -- I -- I cannot imagine how they would
5 have difficulty. I mean, I, as a developer, will 04:30:48
6 go to the website of the first and get -- get --
7 get the commission. I'll go to the website of the
8 second, get the commission. Nobody has a reason
9 not to tell me what their commissions are. So it's
10 going to be -- I -- I -- I don't think at all that 04:31:04
11 this -- this issue is going to arise.

12 Q. Do you agree that Google does not
13 publicize any of its programs that provide lower
14 commissions to developers that have publicized
15 rates? 04:31:20

16 A. I -- I do not know specifically. But as
17 we have discussed earlier in this deposition,
18 Google is doing a number of anticompetitive effects
19 and now you are mentioning one more.

20 Q. Is not publicizing one's commission 04:31:36
21 agreements with particular developments
22 anticompetitive?

23 A. It could very well be. I mean, it
24 depends on how -- what -- what's the size of the --
25 of the company and if it's a dominant company. 04:31:52

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1 I mean, to give you an -- an example from 04:31:54
2 a past case, in the case of -- of Microsoft, it
3 turned out that Microsoft would not allow the --
4 the PC manufacturers to tell each other how much
5 Microsoft was collecting from them to give them the 04:32:15
6 operating system. Okay. So that was a complaint,
7 a very big complaint of IBM and other manufacturers
8 of PCs. And then the government, in the final
9 settlement with Microsoft, imposed the requirement
10 on Microsoft to disclose how much each PC -- how 04:32:36
11 much it was collecting from each PC manufacturer
12 per unit.

13 So there is a precedent on there. But,
14 again, it's a different discussion from what we're
15 focusing on today. They were focusing on the 04:32:53
16 iOS, not on Google.

17 Q. Is it correct that all of your yardsticks
18 point to a but-for average commission rate of 13 to
19 14.8 percent?

20 A. Yes. 04:33:07

21 Q. In your opinion, in the but-for world,
22 would Apple have a two-tier commission structure?

23 A. Yes.

24 Q. Are you relying on Professor Elhauge for
25 that opinion? 04:33:21

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1 A. Well, Professor Elhauge says the same 04:33:23
2 thing. But I also think, on my own, that this
3 makes sense.

10	Q. For how long has Apple had two tiers?	04:33:55
----	--	----------

15 Q. Since the App Store opened, hasn't Apple 04:34:12
16 had a single tier for longer than it's had two
17 tiers?

22 Q. Table 7 on page 31 of your report,
23 reports your commission estimates for the two tiers
24 that you assume, correct?

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1 Q. Your second tier estimates are either 04:34:59
2 9 percent or lower, right?
3 A. The last column?
4 Q. Yes.
5 A. Yes. 04:35:12
6 Q. And the -- well, the last column for
7 both -- both alternatives?
8 A. Correct.
9 Q. They range from 6.8 percent to 9 percent,
10 correct? 04:35:21
11 A. No. 8.229 percent.
12 Q. Well, look -- look to the left. There's
13 a 6.8 percent there?
14 A. Oh, I'm sorry. You're not looking at the
15 last column. Okay. Fine. 04:35:32
16 It's from 6.8 to 7.8, or from 8.229.
17 Q. Okay. Is there any evidence you've seen
18 of a competitive yardstick with a rate below
19 9 percent?
20 A. Well, first of all, you shouldn't really 04:35:46
21 mix up things. The -- these are rates kind of --
22 how can I say -- decentralized which come from the
23 13 to 14.8 -- 13.0 to 14.8 average commission
24 rates.
25 So all that table 7 does is take this 04:36:08

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1 average commission rate, for example, in line 1, 04:36:14
2 14.8, and split it appropriately, according to
3 volume, to tier 1 and tier 2.

4 And in the first case, it split it in
5 the two to one commission ratio, like right now, 04:36:30
6 15, 30. But now it's 15.6, 7.8. And it also,
7 alternative, splits -- splits by -- by subtracting
8 costs from the tier rate in the actual world and in
9 the but-for world.

10 So the -- it's -- we shouldn't lose the 04:36:57
11 fact that the average commission rate from Apple is
12 going to be 14.8, not 15.6, not 7.8. It's going to
13 be 14.8. So that's kind of important to keep in
14 mind, that all table 7 does is a decentralization
15 of the 14.8 yardstick average commission to two 04:37:24
16 different tiers. And similarly for the 14.5 and
17 13.

18 Q. Do you agree that damage calculations
19 should be as precise as you can reasonably make
20 them? 04:37:40

21 MR. HARRINGTON: Objection.

22 THE DEPONENT: Yes.

23 Q. (By Mr. Swanson) Do you agree that
24 damages should not be calculated based on
25 speculation or guesswork? 04:37:45

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1 A. Yes. 04:37:48

2 Q. Do you agree that damages should not be
3 calculated based on hunches?

4 A. Yes.

5 Q. Do you agree that each individual 04:37:59
6 developer member of the class is entitled to
7 recover its full lost profits on account of Apple's
8 alleged anticompetitive conduct?

9 MR. HARRINGTON: Objection.

10 THE DEPONENT: Yes, that's true. 04:38:16

11 Q. (By Mr. Swanson) Do you apply the same
12 measure of damages to the plaintiffs' unfair
13 competition law claim?

14 A. I'm sorry. The unfair competition claim,
15 is this what is referred to as the California 04:38:35
16 unfair competition law?

17 Q. Correct.

18 A. Okay. That -- you're talking about
19 paragraph 77. And on that one, I understand from
20 counsel that members of the proposed class would be 04:38:51
21 entitled to restitution rather than damages.

22 And I have been advised by counsel that
23 the restitution under the California law is
24 measured as the amount to restore the plaintiff --
25 to the plaintiff what has been acquired by a 04:39:08

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1 violation of the statute. 04:39:14

2 And if you define it that way, my
3 analysis of damages applies equally and without
4 modification to the restitution claim of the
5 plaintiffs. 04:39:23

6 Q. Professor, how can you calculate damages
7 for an individual developer without knowing where
8 and on which store or stores the developer would
9 sell its apps in the but-for world?

10 A. Well, we calculate the but-for world with 04:39:41
11 an average rate and the difference between the
12 average rate and what is -- what he pays right now
13 is, in fact, the amount of damages that each
14 developer gets awarded. So this is a conservative
15 amount to measure the damage. 04:40:11

16 Q. What -- what if in the but-for world a
17 specific developer would patronize only a nonApple
18 app store that charged the 6.8 percent commission,
19 how would you calculate its damages?

20 MR. HARRINGTON: Objection. 04:40:38

21 THE DEPONENT: Well, I am giving every
22 developer in the but-for world the average damages.
23 It's very hard to know exactly what would have
24 happened in the but-for world for every particular
25 developer. But on the average, that's what they're 04:40:54

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1 going to get. And I can guarantee to each of these 04:40:56
2 merchants, to each of these developers, that
3 they're going to get this amount of money, the
4 difference between the -- the fee in the but-for
5 world and the average fee -- I'm sorry -- the 04:41:15
6 average fee in the but-for world and the -- what is
7 the average fee right now. Okay.

8 So we can guarantee that. And that's
9 very important that there is a way to calculate
10 damages for the whole class which shows without 04:41:29
11 doubt that every member of the class was damaged
12 and can easily calculate the amount by which he has
13 been damaged and, therefore, the amount that he
14 should be able to recover.

15 Q. (By Mr. Swanson) In paragraph 63 of your 04:41:52
16 report, you state that your measure of damage is
17 conservative because it does not include any
18 additional profit that might have accrued if there
19 were additional sales in the but-for world.

20 Do you see that? 04:42:14

21 A. Yes.

22 Q. Are you saying that your measure is
23 conservative because an accurate measure of
24 developers' lost profits would yield even more
25 damages in every case? 04:42:26

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1 MR. HARRINGTON: Objection. Form. 04:42:28

2 THE DEPONENT: I'm not saying that at
3 all. I mean, I'm saying I have a conservative
4 calculation of -- of damages.

5 Now, is it possible that someone in the 04:42:40

6 but-for world would cut price, it's possible. It's
7 also possible that someone would increase price in
8 the but-for world. But the idea that I can predict

9 that he's going to, let's say, cut price and be
10 successful in selling more, if he would find more 04:43:06

11 people to sell more. That's hard to actually
12 believe.

13 Additionally, if you look carefully at
14 the calculations I have done, if the marginal cost
15 is small, if it's zero, or if it's small, the -- 04:43:27

16 there is no incentive whatsoever for any developer
17 to cut his price. That is, the price that he would
18 sell in the but-for world is exactly the same as
19 the price he would sell in the actual world.

20 So taking it one step further, the only 04:43:50

21 possibility that somebody might have to -- to say,

22 oh, you know, I'm going to cut the price a lot,

23 would be if he had a huge marginal cost, which I

24 think is unlikely. And unlikely, very, very very,

25 very unlikely that -- that would be the case. 04:44:12

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1 And, again, even in that case, the -- you 04:44:18
2 need some kind of guarantee that you would be able
3 to sell more, which we don't know.

4 Finally, if the 99 cents rule remains in
5 the but-for world, it would be very hard for any 04:44:36
6 developer to cut the price to fit exactly in the
7 next 99 segment. Let's say, from -- from 2.99 to
8 1.99. It would be very hard to -- to do that.
9 And, therefore, it would be an impediment to
10 changing prices. 04:45:00

11 Q. (By Mr. Swanson) Take, for example, one
12 of the developers that's had more than a billion
13 dollars in app sales over the class period.

14 Is it your opinion that such a developer
15 that brought its own individual case would not seek 04:45:18
16 to recover damages higher than your, quote/unquote,
17 "conservative calculation"?

18 MR. HARRINGTON: Objection to form.

19 THE DEPONENT: Well, I think people can
20 bring individual cases. Nobody stops them. But to 04:45:39
21 be able to rationally say, I'm going to make more
22 money by bringing the individual case, I need to be
23 absolutely sure that I have a really high marginal
24 cost because that's going to be the only
25 possibility for me to find -- me, as a developer, 04:45:59

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1 to find to -- to be able to sell more. 04:46:04

2 And additionally, I have to be able to
3 somehow prove that not -- it's not going to be
4 easy. That, in fact, I will be able to sell more.

5 And finally, I have to be able to say, 04:46:21

6 oh, and the price the -- the reduction I'm going to
7 have has to fit exactly between from 2.99 to 1.99.

8 These are very hard conditions to fulfill. And I
9 think it's unlikely that they will be fulfilled
10 and, therefore, my calculation is -- is the best 04:46:41
11 bet for the -- for the developers.

12 Q. (By Mr. Swanson) You agree that you
13 calculate damages assuming that developers would
14 not change their prices, correct?

15 MR. HARRINGTON: Objection to form. 04:47:01

16 THE DEPONENT: Yes.

17 Q. (By Mr. Swanson) And are you testifying
18 now that you believe that assumption is 100 percent
19 accurate as a factual matter?

20 MR. BURT: Objection to form. 04:47:19

21 THE DEPONENT: Well, I already explained
22 why I think it's a -- it's a very, very, very
23 reasonable assumption.

24 First to be able to have an incentive to
25 change the price, you need to have a high marginal 04:47:32

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1 costs, and I believe that in most cases, we do not 04:47:36
2 have a high marginal cost for these apps.

3 Second, you need to be able to credibly
4 show that you will be able to make higher sales at
5 the lower price in the but-for world, and I think 04:47:54
6 that's a high hurdle.

7 And third, you need to be able to show
8 that your particular discount would fit in the grid
9 from 3.99 to 2.99 or 1.99.

10 These are very hard conditions to meet, 04:48:11
11 and I believe that the calculation I have done is
12 conservative and safe, and it will give to every
13 person in the class an amount by which they were
14 injured, on the average.

15 Q. (By Mr. Swanson) Do you agree that if a 04:48:32
16 developer is charged the same commission in the
17 but-for world as in the actual world, it will not
18 change its but-for price for the app?

19 MR. HARRINGTON: Objection to form.

20 THE DEPONENT: Can I hear it one more 04:48:49
21 time? I'm not sure I understood it right.

22 Q. (By Mr. Swanson) If -- if a developer is
23 charged the same commission in the but-for world as
24 it was charged in the actual world, do you agree
25 that it will not change its app price? 04:49:01

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1 MR. HARRINGTON: Same objection. 04:49:06

2 THE DEPONENT: Well, I mean, I -- I find
3 it very unlikely that the developer in the but-for
4 world would pay the same price as now. Here we are
5 talking about, on the average, the commission going 04:49:23
6 anywhere between 13 to 14.8, instead of the present
7 one almost 30 percent commission.

8 So it would be very hard to imagine a
9 situation in which some developer would not be able
10 to benefit very substantially from the commission 04:49:42
11 reduction in the but-for world.

12 Q. (By Mr. Swanson) That's not the question
13 I asked, Professor. Please listen.

14 If a developer is charged the same
15 commission in the but-for world as in the actual 04:49:57
16 world, is it your opinion that it would charge the
17 same price in both worlds?

18 MR. HARRINGTON: Same objection.

19 THE DEPONENT: Okay. I gave a long
20 answer to you saying why the premise of your 04:50:08
21 question is wrong. So I don't know how to answer a
22 question when the premise of the -- of the question
23 is completely wrong.

24 Q. (By Mr. Swanson) Well, if we have a
25 hearing before the judge, I'm going to ask you this 04:50:21

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1 question, so think carefully about it, whether you 04:50:24
2 can answer it or not.

3 If, in the but-for world, a developer is
4 charged the same commission as it is charged in the
5 actual world, is it your opinion that that 04:50:36
6 developer's app price in the but-for world will be
7 the same as in the actual world?

8 MR. HARRINGTON: Same objection.

9 THE DEPONENT: Well, again, I'll say
10 the -- the following answer: Your premise doesn't 04:50:48
11 make any sense at all to me as an economist, so I
12 don't know what else to say.

13 I mean, would he be charged the same, who
14 knows? I mean, when you're making this assumption,
15 which doesn't make any sense, I cannot give you a 04:51:04
16 reasonable economic answer to this question -- to
17 this answer -- this question, yes.

18 Q. (By Mr. Swanson) Okay. But if I told
19 you that a given developer was charged a lower
20 commission in the but-for world, you'd be 04:51:16
21 absolutely positive that it would not change its
22 price compared to the actual world?

23 MR. BURT: Objection. Form.

24 THE DEPONENT: Well, I have -- I have
25 calculated the average commission in the but-for 04:51:28

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1 world, and there is no doubt that the -- that the 04:51:32
2 developer will be better off and he will charge --
3 if he keeps charging the same price as before, as
4 in the actual world.

5 MR. SWANSON: Let's take a break. We've 04:51:54
6 been going for more than an hour.

7 THE DEPONENT: Okay. Thank you.

8 MR. HARRINGTON: You want ten minutes?

9 MR. SWANSON: Sure.

10 THE VIDEOGRAPHER: We're now going off 04:52:07
11 the record. The time is 4:52.

12 (Recess taken.)

13 THE VIDEOGRAPHER: We're now back on the
14 record. The time is 5:04.

15 Q. (By Mr. Swanson) Professor, is it your 05:04:37
16 opinion that output in the but-for world will be
17 higher in the relevant market than in the actual
18 world?

19 A. Let me try to answer that. Whether that
20 is the case will depend on whether a particular 05:05:12
21 developer has a high marginal cost and is able to
22 cut price and can sell more and has a guarantee
23 that he would sell more and that the price cut that
24 he does fit the 99-cent tiers. So these are
25 three different conditions which, in my opinion, 05:05:41

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1 are unlikely to be met. 05:05:44

2 Q. Okay.

3 A. Therefore, most likely, we are going to
4 be with the same quantity in the but-for world as
5 now. 05:05:56

6 Q. And that's true at the level of the
7 market?

8 A. I'm sorry?

9 Q. Is that your opinion at the level of the
10 market? 05:06:05

11 MR. HARRINGTON: Objection to form.

12 THE DEPONENT: That's correct. And
13 individually as well.

14 Q. (By Mr. Swanson) Okay. Could you please
15 pull up -- or maybe you have a hard copy -- your 05:06:16
16 most recent errata, I think from yesterday or the
17 day before, Exhibit 30.

18 A. I don't think I have them in electronic
19 form. Maybe you can find a way to put them on
20 exhibits. 05:06:33

21 Q. Yes. If you go to the Exhibit Share and
22 look at Exhibit 30, you'll find it.

23 A. All right. Thank you. Okay. I see it.

24 Q. Okay. I'd like to ask you about your
25 replacement for figure 3. 05:06:58

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1 A. Yes. 05:07:01

2 Q. So -- so your report should be amended.

3 This is what you would have in lieu of the

4 figure 3 in --

5 A. Yes. I mean it was, you know, in the -- 05:07:09

6 in the pagination of the big document. This being

7 created in Microsoft Word, some lines moved around,

8 so this is the way it's supposed to be.

9 Q. Now, we'll just -- can I just refer to
10 this as figure 3 -- 05:07:30

11 A. Sure.

12 Q. -- and -- and we're talking about the

13 correct one in Exhibit 30?

14 A. Yes.

15 Q. So figure 3 depicts a monopolist 05:07:39
16 developer, does it not?

17 A. Correct.

18 Q. And in the analysis that you undertake in
19 your report with respect to figure 3, the only
20 change the developer experiences is a fall in his 05:08:00
21 or her commission, right?

22 A. He -- now the developer faces a lower
23 demand curve. So originally in the but-for world,
24 let's say he was facing the blue line from C going
25 down forward -- going down all the way to Q, and 05:08:26

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1 now he's facing the orange line called D2, which is 05:08:32
2 a smaller willingness to pay, because the remaining
3 was acquire -- was -- was sucked up by -- by -- by
4 Amazon -- sorry, by Apple. Sorry, not Amazon, I'm
5 sorry. 05:08:47

6 Q. Now, if there are no price tiers
7 restricting this developer and you -- you don't
8 predict price tiers here, do you?

9 A. No. This is about the average
10 commission, not the price tiers. 05:09:04

11 Q. Okay. So in this example, the developer
12 would reduce price?

13 A. Well, this is an example with very
14 significant marginal costs. Again, keep in mind
15 that if the -- if you can imagine the marginal cost 05:09:21
16 line going down horizontally without changing slope
17 and reaching the Q axis, then you would get -- the
18 points A and B would coincide, and, therefore, for
19 marginal cost equals zero, there would be for sure
20 no change whatsoever in the quantity of the 05:09:45
21 developer.

22 Now, in the example here, there is a big
23 marginal cost of the developer, and that shows in
24 the -- in the diagram as a -- a potential change in
25 the quantity from Q2 to Q1. 05:10:08

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1 But as I was saying in your answer -- in 05:10:12
2 the question that you posed right before, to be
3 able to do this expansion in quantity, the
4 developer needs to be sure that he can actually
5 sell more in the -- in the but-for world, which is 05:10:31
6 highly uncertain.

7 Of course he needs a high marginal cost.
8 It's already drawn there. Then he needs to make
9 sure that he can actually sell more.

10 And the third thing is that he needs to 05:10:44
11 be sure that the Q1/Q2 quantities fit in the 1.99,
12 2.99 -- how can I say -- 1.99, 2.99 price tiers,
13 that he's need to know that if p3 was at whatever,
14 2.99, 3.99, that p1 would be exactly at the
15 lower -- slightly lower tier, and that idea that's 05:11:23
16 it's going to fit exactly in these tiers is very --
17 in my opinion, very unlikely.

18 So you have three different conditions
19 that are very likely to derail the increase in
20 output for a developer in the but-for world. 05:11:46

21 Q. And you understand that other than the
22 price tier issue, Professor McFadden disagrees with
23 you on -- on those opinions?

24 MR. BURT: Objection. Form.

25 THE DEPONENT: I'm not sure if -- how 05:12:08

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1 much he disagree with me. I mean, I think he -- he 05:12:08
2 thinks that marginal costs is -- is high. I do not
3 agree with him that that's the case.

4 Now, I don't think he discusses at all
5 the possibility of the expansion and whether that 05:12:28
6 expansion in quantity could be supported for a
7 developer in the but-for world. I don't remember
8 seeing that -- that discussion.

9 And, of course, there is a problem on the
10 tiers, that it has to fit -- the prices have to fit 05:12:46
11 the right tiers.

12 Q. (By Mr. Swanson) If you look at
13 footnote 96 on page 34, which is back in the -- in
14 the report, is that footnote still applicable to
15 the revised figure 3? 05:13:04

16 A. Yes. I mean, the whole figure 3 is -- is
17 drawn for linear demand for illustration. If you
18 had nonlinear demands, the same arguments would go
19 through; it's just that the demand would be
20 nonlinear and a bit harder to draw. 05:13:25

21 Q. Now, you say in footnote 96 that, "This
22 demand curve takes into account network effects
23 between developers and their users."

24 What's the basis for that statement?

25 A. It's just making sure that nobody can say 05:13:42

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1 matter what. It doesn't involve any conflicts with 05:15:10
2 the consumers.

3 If the consumers can claim damages,
4 they're going to be over and above the amount that
5 I have -- my model gives to the developers. 05:15:25

6 Q. And is Professor McFadden's model a
7 better and more accurate assessment of what the
8 developers' damages would be than your model?

9 MR. BURT: Objection.

10 MR. HARRINGTON: Objection to form. 05:15:44

11 THE DEPONENT: Well, first of all, my
12 model doesn't discuss the -- what the -- oh, I'm
13 sorry. You said the developers. Let me hear the
14 question again, sorry. It's getting late in the
15 day. Let me hear it again, yeah. 05:15:55

16 Q. (By Mr. Swanson) Is Professor McFadden's
17 model -- does it provide a better and more accurate
18 assessment of what the developers' damages would be
19 compared to your model?

20 MR. BURT: Objection. 05:16:08

21 MR. HARRINGTON: Objection.

22 THE DEPONENT: No. My -- my model is far
23 better in -- in describing the -- the damages for
24 the developers.

25 Q. (By Mr. Swanson) Does your report 05:16:20

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1 identify any methodology for measuring developers' 05:16:21
2 lost profits on a common basis without assuming
3 that app prices stay the same in the but-for world?

4 A. My model assumes that the developers
5 would get the average price in the but-for world. 05:16:40

6 So once you have that, then you have an overcharge,
7 but -- excuse me -- because I include costs, it can
8 easily be translated to profits. So you have seen
9 probably some other models in some other case in
10 which people just talk about revenue changes, and, 05:17:09
11 therefore, it looks like it doesn't translate to
12 profits.

13 But my model, the way it's set up, as
14 long as fixed costs remains the same between the
15 actual world and the but-for world, will give you 05:17:22
16 not only overcharge but also profits change.

17 Q. In the but-for world, what, if anything,
18 do you assume about non-U.S. developers' behavior?

19 A. I try to limit the whole analysis to U.S.
20 developers, and on that respect, we relied on the 05:17:51
21 data that was provided to us from Apple, by Apple,
22 and we relied on the various fields that identify
23 these developers as U.S. developers.

24 Q. Could you turn to paragraph 71 of your
25 report, please. 05:18:22

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1 A. Yes. 05:18:33

2 Q. You state that you "understand from
3 counsel that the damages period in this case begins
4 on June 4th, 2015, and continues through the
5 present." 05:18:42

6 So as I understand it, you don't intend
7 to calculate damages starting before June 4th,
8 2015; is that correct?

9 A. That is correct.

10 Q. What steps have you taken to make sure 05:18:53
11 your damage estimates don't include the effects of
12 conduct before June 4th, 2015?

13 MR. HARRINGTON: Objection to form.

14 THE DEPONENT: I'm not sure what conduct
15 we're talking about. Here we have Apple being the 05:19:05
16 single distributor of apps for sure from June 4,
17 '15, but even earlier. And we have the report by
18 Professor Elhauge on the anticompetitive effects of
19 Apple's actions.

20 So what I have done is taken the 05:19:37
21 liability as given, calculate the damages after
22 June 4th, 2015.

23 Q. (By Mr. Swanson) In your opinion, did
24 any developers in the class suffer injury after
25 June 4, 2015, due to alleged anticompetitive 05:19:56

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1	conduct by Apple before June 4, 2015?	05:20:00
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2 A. I -- I do -- I have not calculated such
3 damage.

4 Q. Do -- do you calculate damages for all of
5 the conduct that Professor Elhauge concludes is 05:20:27
6 anticompetitive?

7	A. Yes.
---	---------

8 Q. So there's no specific conduct that
9 Professor Elhauge concludes is anticompetitive but
10 for which for you calculated no damage amount? 05:20:39

11 A. I -- I calculated the damages based on
12 the anticompetitive findings of Professor Elhaug
13 across the board.

14	Q. You calculate damages associated with	
15	Professor Elhauge's opinion that there is an	05:21:02
16	anticompetitive tie between iOS smartphones and	
17	tablets and iOS app distribution?	

18 A. I have not calculated specific damages
19 for each one of the anticompetitive actions of --
20 of Apple, so I have calculated damages for the 05:21:22
21 whole thing, for the whole collection of
22 anticompetitive actions.

23 Q. So that includes damages for what
24 Professor Elhauge views is an anticompetitive tie
25 involving iOS smartphones and tablets; is that 05:21:39

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1 correct? 05:21:41

2 A. It's part of the anticompetitive behavior
3 of Apple that Professor Elhauge's proves, and I
4 assume that anticompetitive actions as a whole for
5 the creation of damages. For the calculation of 05:21:58
6 damages, I should say.

7 Q. Would -- would your damage calculation be
8 the same if the finder of fact determines that
9 Professor Elhauge's opinion that there is an
10 anticompetitive tie between iOS smartphones and 05:22:17
11 tablets and iOS app distribution is incorrect?

12 A. Well, if there are findings by the Court
13 that in some way change the anticompetitive effects
14 that I assume, I reserve the right to recalculate.

15 Q. So in particular, if Professor Elhauge's 05:22:48
16 opinion about this alleged anticompetitive tie was
17 not sustained, you would need to recalculate
18 damages, correct?

19 A. I have stated that if there is -- if the
20 Court changes the anticompetitive facts that I'm 05:23:11
21 taking now as facts, the anticompetitive behavior
22 that Professor Elhauge describes that I'm taking as
23 fact, so if the Court decides, Oh, we're going to
24 change this, then I preserve the right to
25 recalculate. 05:23:38

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1 Q. Are you aware that Donald Cameron has had 05:23:44
2 multiple iPads?
3 A. You mean he possessed multiple iPads?
4 Q. Yes.
5 A. No, I'm not aware of that. 05:23:58
6 Q. Are you aware that -- well, are you aware
7 whether he's a member of the alleged consumer class
8 or not?
9 A. I do not know.
10 Q. Are you calculating any damages for 05:24:14
11 Donald Cameron as a consumer of iOS apps?
12 A. I have not calculated any damage for
13 consumers. I have only calculated damage for
14 developers.
15 Q. You're aware that many developers are 05:24:29
16 individuals, are you not?
17 A. Yes.
18 Q. And you're aware that developers who are
19 individuals are highly likely to have Apple iOS
20 devices, are you not? 05:24:44
21 MR. HARRINGTON: Objection.
22 THE DEPONENT: It's possible.
23 Q. (By Mr. Swanson) It's possible -- you
24 think it's just possible?
25 A. Well, I mean, unless I have looked at 05:24:50

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1 the -- specifically what they owned, I wouldn't be 05:24:52
2 able to say for sure.

3 Q. Okay.

4 A. It's possible, yeah.

5 Q. And how many iOS developers are also 05:24:58
6 members of the alleged consumer class?

7 A. I do not know that.

8 Q. Isn't it a fact that there are many
9 individuals who are among the 60,000 developers in
10 the alleged developer class and also in the alleged 05:25:20
11 consumer class?

12 A. It's possible. I haven't examined that.

13 Q. Do your damage estimates include any
14 damages incurred by Epic?

15 A. Well, Epic is a developer, correct? I 05:25:43
16 mean, therefore, I -- I calculated damages for all
17 developers, and that means including Epic.

18 Q. Well, hasn't Epic waived its damage
19 claim?

20 A. That, I don't know. 05:25:58

21 Q. How would you --

22 A. I mean -- go ahead.

23 Q. How would you remove Epic's damages from
24 your estimates?

25 A. Well, if what you're saying is correct, 05:26:07

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1 estimate of the percentage of uninjured class 05:27:57

2 members is zero; is that right?

3 A. That -- that is correct. And I -- I

4 believe again, we -- we -- you have asked this

5 question a different way, that in the but-for world 05:28:07

6 every member of the class would be better off,

7 every member -- every developer would be -- would

8 be better off even if some of them are using, to

9 some extent, Apple.

10 Not only I believe that Apple's 05:28:29

11 commission is going to go down, but additionally,

12 the developers would be able -- would be able to

13 distribute through multiple stores and also

14 self-distribute and be able to achieve lower

15 effective commission fee and, therefore, be better 05:28:52

16 off.

17 Q. Turn, please, to table 9 in your report,

18 on page 39.

19 A. Yes.

20 Q. So your total damage estimates range from 05:29:07

21 [REDACTED] correct?

22 A. Yes.

23 Q. Which estimate is the most accurate, in

24 your opinion?

25 A. Well, because the anticompetitive actions 05:29:25

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1 of Apple did not give us the possibility of a 05:29:34
2 benchmark in the before and after period, we -- I
3 used the yardsticks, the PC world yard --
4 yardsticks -- yardstick and the profit yardstick.

5 And these give slightly different rates on the 05:29:49
6 but-for world commission. In the first column of
7 table 9, from 14.8 to 13.

8 So what I would do is present this table
9 to the judge and tell the judge that, in my
10 opinion, these numbers are very similar in terms of 05:30:14
11 the but-for commission rate. And, of course, the
12 total damages are also very similar. And let the
13 judge decide which one she believes is the best
14 one, is the most -- is the most appropriate one.

15 Q. Are, in your opinion, free apps 05:30:35
16 substitutes for paid downloads?

17 MR. HARRINGTON: Objection.

18 THE DEPONENT: I -- I have not get -- I
19 did not get involved in free apps at all.

20 Q. (By Mr. Swanson) So you can't answer the 05:30:48
21 question. You have no opinion as to whether free
22 apps are substitutes for paid downloads?

23 A. It wasn't part of my assignment.

24 Q. Well, again, my question is not limited
25 to what was or wasn't your assignment. 05:31:01

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1 It's whether you have an opinion or not. 05:31:03

2 If you have no opinion, that's fine. But please
3 answer my question, which I will repeat.

4 Are free apps, in your opinion,
5 substitutes for paid downloads? 05:31:15

6 MR. HARRINGTON: Same objection.

7 THE DEPONENT: Well, I can imagine some
8 situations there might be. But, again, this is not
9 something I spent time on or I can create a
10 definitive opinion to give you. 05:31:33

11 Q. (By Mr. Swanson) Are free apps
12 substitutes for free downloads with in-app
13 purchase?

14 MR. HARRINGTON: Objection.

15 THE DEPONENT: Again, that was, first of 05:31:50
16 all, not my assignment. Second, one has to examine
17 this in some detail. And I'm not going to come in
18 here and on top of my head tell you something that
19 I haven't thought thoroughly.

20 Q. (By Mr. Swanson) Well, have you seen any 05:32:08
21 evidence in this case to suggest that free and paid
22 apps do not compete with one another?

23 A. I'm not sure. I mean, the answer is, I
24 would like to answer your question in detail, but I
25 haven't spent enough time on this to be able to 05:32:30

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1 answer this conclusively. 05:32:33

2 Q. All right. Based on your review of the
3 evidence thus far in the case, is it your opinion
4 that developers can change the business model for a
5 particular app over time? 05:32:56

6 A. Could you be a bit more precise by
7 "change the business model."

8 Q. Sure.
9 For example, have you seen evidence that
10 developers can start with a free app and then at a 05:33:09
11 later time change that app into one that has an
12 in-app purchase option, whether a subscription or
13 some type of digital content?

14 A. That's a possibility. I -- at least a
15 theoretical possibility. I have not seen evidence 05:33:28
16 of specific apps doing that.

17 MR. SWANSON: Okay. I would suggest, if
18 it's okay, we take a brief break because I think
19 that will help me reach the conclusion that I'm
20 probably done, which will be good news for 05:33:55
21 everyone, but...

22 MR. HARRINGTON: In -- in that case, we
23 don't object to taking a break.

24 MR. SWANSON: Okay. All right. Let's
25 take a short break. Hopefully five minutes. 05:34:03

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1 THE VIDEOGRAPHER: Okay. We're now going 05:34:06
2 off the record. The time is 5:34.

3 (Recess taken.)

4 THE VIDEOGRAPHER: We're now back on the
5 record. The time is 5:41. 05:41:09

6 MR. SWANSON: All right. I've just got a
7 couple more questions. A statement which our judge
8 has warned us never -- warned us against ever
9 saying. But I really do just have a few.

10 Q. (By Mr. Swanson) Professor, do you hold 05:41:25
11 any opinions which you intend to offer to the court
12 that were not set forth in your report or discussed
13 in this deposition?

14 A. Well, my work in this case is continuing.
15 So to the extent that I have a newer understanding 05:41:38
16 as the -- as I get to see more documents and so on,
17 my -- my final conclusions might change.

18 Q. But as you sit here today, do you hold
19 any opinions which you intend to offer to the court
20 that were not set forth in your reports or 05:42:04
21 discussed in this deposition?

22 A. No. There is the issue of the -- of the
23 new data, which will inflate the -- the damages --
24 to increase the damages. But that's kind of a
25 technical issue which is not going to change my -- 05:42:21

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1 my basic opinions. 05:42:24

2 But I said this is -- in general, that as

3 the case progresses, it is possible for me -- my

4 opinions to change. But I don't -- if you're

5 asking me what are my opinions this far, they're 05:42:34

6 the ones we discussed in the deposition.

7 Q. Okay. Thank you.

8 Do you know of any way to test the

9 validity of your opinions, other than the work that

10 you've already done? 05:42:46

11 MR. HARRINGTON: Objection to form.

12 THE DEPONENT: I have written down all

13 the various ways in which my opinion can be

14 sustained.

15 Now, it is conceivable, that as times 05:43:06

16 goes on, I'll get smarter and find new ways. But

17 the way it is right now is what you see.

18 Q. (By Mr. Swanson) Is there any data or

19 information suggested by economic theory that you

20 would like to have assembled before reaching your 05:43:25

21 opinions but which was simply not available to you?

22 A. That's kind of a broad and general

23 question.

24 The more data you have, the better off

25 you are in doing this kind of calculations. I 05:43:41

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1 wouldn't be able to say about any particular type 05:43:47
2 of -- of -- of data. But to the extent that more
3 data becomes available, I will use it to the extent
4 I can.

5 Q. Have you seen any economic evidence that 05:44:02
6 contradicts any of your opinions?

7 A. No.

8 MR. SWANSON: Okay. With that, I have no
9 further questions at this time.

10 THE DEPONENT: Thank you, Mr. Swanson. 05:44:15

11 MR. BURT: I have some.

12 MR. HARRINGTON: No -- let me just say
13 real quick, no questions for the developers. We
14 would just like to reserve the right for
15 Professor Economides to review the transcript and 05:44:26
16 prepare an errata, if he feels that's appropriate.

17 THE DEPONENT: Thank you.

18 MR. HARRINGTON: As for confidentially, I
19 think the practice is to designate confidential
20 subject to dedesignation. 05:44:35

21 Is that what we've been doing?

22 MR. SWANSON: I believe so.

23 MR. HARRINGTON: Okay.

24 MR. SWANSON: I think that's what the
25 protective order allows for, right? 05:44:43

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1 MR. HARRINGTON: I -- I think that's 05:44:45
2 right. So let's go with that unless we can figure
3 out we should be doing something different.

4 EXAMINATION

5 BY MR. BURT: 05:44:56

6 Q. Professor Economides, I -- I will have a
7 few minutes.

8 Professor Economides, my name is
9 Thomas Burt. I'm here representing Consumer
10 Plaintiffs. 05:45:01

11 A. Hello.

12 Q. I want to -- I want to ask you first, is
13 there anywhere in your report that you make use of
14 actual data on developers' marginal costs?

15 A. The short answer is no, I do not have 05:45:16
16 this data.

17 Q. And pardon -- pardon me for being
18 detailed.

19 Is there anywhere that you make use of
20 actual data on developers' customer acquisition 05:45:26
21 costs?

22 A. I have not used that in my report.

23 Q. And have you made use anywhere in your
24 report of data on actual developers' Web hosting
25 costs? 05:45:44

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3 Q. Okay. Have you made any calculation of
4 developer marginal costs?

7 Q. Mr. Swanson asked you a while ago about
8 whether you'd calculated consumer damages for
9 Mr. Cameron, or something of that nature.

13 I just want to make sure I understood you

14 correctly.

18 A. That's correct.

22 A. Well, I -- I have a damages model and we
23 can -- we went through a long discussion with
24 Mr. Swanson about the possibility of prices being
25 different for developers in the but-for world.

05:47:06

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1 And if I can summarize this, is that even 05:47:11
2 if the developers had a high cost, a high marginal
3 cost, and they did try to expand, there is no
4 guarantee that they would be successful in
5 expanding. And plus, the -- the tiers -- the tiers 05:47:30
6 structure would prevent them from doing that
7 expansion.

8 Now, why do I say that. Because if there
9 is an amount for the -- for the consumers, it would
10 come necessarily from that kind of expansion. 05:47:49

11 Q. Have you made an attempt to do a
12 calculation about what would happen -- let me
13 withdraw that and ask it a different way.

14 Have you made an attempt to do any
15 calculation that assumes that price tiering will 05:48:05
16 not be permitted?

17 A. I -- I have not done a specific
18 calculation.

19 Q. Okay. I want to ask you to take a look
20 at paragraph 64 of your report. 05:48:18

21 A. Yes.

22 Q. I believe it's the third sentence. It
23 says here, "Since in the but-for world they face a
24 lower commission rate, developers may have found it
25 optimal to charge a lower price." 05:48:38

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1 And then paragraph continues, but that's 05:48:40
2 the end of the sentence.

3 Do you stand by that?

4 A. Well, I mean, we just discussed it a
5 minute ago -- a minute ago. 05:48:48

6 The developers may have found it optimal
7 to charge a lower price. They might even have
8 found it optimal to charge a higher price,
9 depending on the elasticity of demand differences.

10 But we discussed much further in this 05:49:03
11 deposition that there might be impediments for the
12 developers to implement that strategy of a lower
13 price or a higher price because they need to be
14 able to make sure the consumers accept that.

15 Second, there is the problem of the -- of 05:49:32
16 the tiers that might create impediment for them.
17 And, of course, the only way that the -- there
18 might be an incentive to change the price is if
19 there is a high marginal cost --

20 Q. Okay. So what I'm -- 05:49:53

21 A. -- otherwise that will happen.

22 Q. Let -- let me ask you a different way.

23 Are you saying that that clarifies your
24 intuition about how what you wrote in paragraph 64
25 would play out, or are you saying that paragraph 05:50:03

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1 64, as you wrote it, is wrong, or are you saying 05:50:06

2 something else?

3 MR. HARRINGTON: Objection to form.

4 THE DEPONENT: Well, I -- I -- I explain

5 it in the previous answer, that paragraph 64 says 05:50:15

6 this, and I stand by it. But there are impediments

7 in changing the price because of the 99 cent

8 structure, because you have to make sure that

9 people actually buy more of your good or accept a

10 higher price. 05:50:39

11 And -- and also to keep in mind there's a

12 premise to this sentence coming from since, since

13 in the but-for world it's on. And the premise is

14 that the marginal cost is significant.

15 So these are the -- these are my -- my -- 05:50:55

16 my three issues on that -- on that subject.

17 MR. BURT: I have no further questions.

18 Thank you for your time, Professor.

19 THE DEPONENT: Thank you.

20 MR. SWANSON: Yeah, I think we're -- 05:51:10

21 we're done then.

22 Thank you for your time, Professor.

23 THE DEPONENT: Thank you. Nice meeting

24 you all.

25 THE VIDEOGRAPHER: This now concludes 05:51:17

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1 today's deposition of Nicholas Economides. We're 05:51:18
2 now going off the record. The time is 5:51 p.m.

3 (TIME NOTED: 5:51 P.M.)

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1 I, NICHOLAS ECONOMIDES, do hereby declare
2 under penalty of perjury that I have read the
3 foregoing transcript; that I have made any
4 corrections as appear notes; that my testimony as
5 contained herein, as corrected, is true and
6 correct.

7 Executed this ____ day of _____,
8 2021, at _____, _____.

9
10
11
12 _____
NICHOLAS ECONOMIDES

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1 I, Rebecca L. Romano, a Registered
2 Professional Reporter, Certified Shorthand
3 Reporter, Certified Court Reporter, do hereby
4 certify:

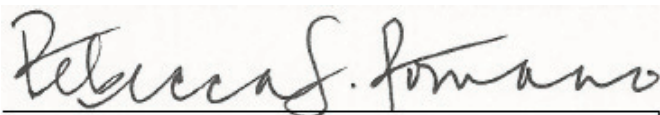
5 That the foregoing proceedings were taken
6 before me remotely at the time and place herein set
7 forth; that any deponents in the foregoing
8 proceedings, prior to testifying, were administered
9 an oath; that a record of the proceedings was made
10 by me using machine shorthand which was thereafter
11 transcribed under my direction; that the foregoing
12 transcript is true record of the testimony given.

13 Further, that if the foregoing pertains to the
14 original transcript of a deposition in a Federal
15 Case, before completion of the proceedings, review
16 of the transcript [X] was [] was not requested.

17 I further certify I am neither financially
18 interested in the action nor a relative or employee
19 of any attorney or any party to this action.

20 IN WITNESS WHEREOF, I have this date
21 subscribed my name.

22 Dated: August 5, 2021

23 
24

Rebecca L. Romano, RPR, CCR

CSR. No 12546

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MR. BEN HARRINGTON, ESQ.

benh@hbsslaw.com

August 5, 2021

RE: DONALD R. CAMERON vs. Apple Inc.

8/4/2021, NICHOLAS ECONOMIDES, JOB NO. 4737876

The above-referenced transcript has been completed by Veritext Legal Solutions and review of the transcript is being handled as follows:

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Contact Veritext to schedule a time to review the original transcript at a Veritext office.

___ Per CA State Code (CCP 2025.520 (a)-(e)) - Locked .PDF Transcript - The witness should review the transcript and make any necessary corrections on the errata pages included below, notating the page and line number of the corrections. The witness should then sign and date the errata and penalty of perjury pages and return the completed pages to all appearing counsel within the period of time determined at the deposition or provided by the Code of Civil Procedure.

___ Waiving the CA Code of Civil Procedure per Stipulation of Counsel - Original transcript to be released for signature as determined at the deposition.

___ Signature Waived - Reading & Signature was waived at the time of the deposition.

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1 _X_ Federal R&S Requested (FRCP 30(e)(1)(B)) - Locked .PDF
2 Transcript - The witness should review the transcript and
3 make any necessary corrections on the errata pages included
4 below, notating the page and line number of the corrections.
5 The witness should then sign and date the errata and penalty
6 of perjury pages and return the completed pages to all
7 appearing counsel within the period of time determined at
8 the deposition or provided by the Federal Rules.
9 __ Federal R&S Not Requested - Reading & Signature was not
10 requested before the completion of the deposition.

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1 DONALD R. CAMERON vs. Apple Inc.

2 NICHOLAS ECONOMIDES (JOB NO. 4737876)

3 E R R A T A S H E E T

4 PAGE_____ LINE_____ CHANGE_____

5 _____

6 REASON_____

7 PAGE_____ LINE_____ CHANGE_____

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9 REASON_____

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18 REASON_____

19 PAGE_____ LINE_____ CHANGE_____

20 _____

21 REASON_____

22 _____

23 _____

24 WITNESS _____ Date _____

25 _____

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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